Coast of California Storm and Tidal Waves Study (CCSTWS)
Ventura/ Santa Barbara Counties, California

Draft Project Management Plan Report

Los Angeles District, U.S. Army Corps of Engineers

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Coast of California Storm and Tidal Waves Study (CCSTWS)
Ventura/ Santa Barbara Counties, California

Project Management Plan

Table of Contents

List of Enclosures

Chapter I. The Project Management Plan

This Project Management Plan (PMP) is an attachment to the Feasibility Cost Sharing Agreement (FCSA) for the Coast of California Storm and Tidal Waves Study – Ventura/ Santa Barbara Counties. This document defines the planning approach, activities to be accomplished, schedule, and associated costs that the Federal Government and the Non-Federal Sponsors will be supporting financially. The PMP defines a contract between the Corps of Engineers and the Non-Federal Sponsor – the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON), and reflects a buy-in on the part of the financial backers, as well as those who will be performing and reviewing the activities involved in the shoreline special study.

Basis for Change

Because planning is an iterative process without a predetermined outcome, more or less funding and time may be required to accomplish the formulation and reformulation and evaluation of the alternative plans. With clear descriptions of the scopes and assumptions outlined in the PMP, deviations are easier to identify. The impact in either time or money is easily assessed and decisions can be made on how to proceed. The PMP provides a basis for change.

Review and Evaluation

The PMP is a basis for the review and evaluation of the study report. Since the PMP represents a contract among study participants, it will be used as the basis to determine if the draft Coast of California Storm and Tidal Waves Study report has been developed in accordance with established procedures and previous agreements. The PMP reflects mutual agreements between the Los Angeles District (CESPL), the South Pacific Division (CESPD), the Non-Federal Sponsor – the Counties of Ventura and Santa Barbara, and Headquarters, U.S. Army Corps of Engineers (HQUSACE) regarding the Coast of California Storm and Tidal Waves Study. The PMP establishes the scope, critical assumptions, methodologies, and level of detail for the studies that are to be conducted during the study. Review of the draft report will be to insure that the study has been developed consistent with these agreements. The objective is to provide early assurance that the project is developed in a way that can be supported by higher headquarters.

Management Tool

The PMP is a study management tool that includes scopes of work to be used for funds allocation by the Project Manager. It forms the basis for identifying commitments to the Non-Federal Sponsors and serves as a basis for performance measurement.

Summary of PMP Requirements

This PMP is comprised of the following chapters:

Chapter 1. The Project Management Plan. This chapter includes a description of the PMP and a summary of PMP requirements.

Chapter 2. Section 905(b) Analysis. The approved Section 905(b) Analysis includes an overview of the reconnaissance study findings, the plan formulation rationale, and the proposed streamlining study initiatives and cost. This chapter also documents any deviations from the approved Section 905(b) Analysis that have occurred during the negotiations of the FCSA.

Chapter 3. Work Breakdown Structure. A product-based Work Breakdown Structure (WBS) defines the project, subprojects, and parent tasks and other tasks that will be accomplished throughout the study. The major milestone tasks and definitions are included as Enclosure B to the PMP.

Chapter 4. Scopes of Work. A detailed scope of the tasks and activities that describes in narrative form the work to be accomplished, and answers the questions -- What? How? How Much? This chapter provides a reference to the detailed scopes of work, which are included as Enclosure C to the PMP.

Chapter 5. Responsibility Assignment. The Organizational Breakdown Structure (OBS) defines who will perform work on the study. This allows the identification of the functional organization that will perform each of the tasks in a Responsibility Assignment Matrix (RAM).

Chapter 6. Study Schedule. The schedule defines when key decision points, CESPD milestone conferences and mandatory HQUSACE milestones will be accomplished.

Chapter 7. Study Cost Estimate. This is the baseline cost estimate for the feasibility phase study.

Chapter 8. Quality Management Plan. This chapter supplements the District's Quality Management Plan. It highlights any deviations to the District's plan and lists the members of the study team and the Independent Review Team.

Chapter 9. Identification of Procedures and Criteria. This chapter references the regulations and other guidance that cover the planning process and reporting procedures.

Chapter 10. Public Involvement and Coordination. Public involvement and coordination activities for the Ventura/ Santa Barbara Counties' Coast of California Storm and Tidal Waves Study are described in this chapter.

Chapter 2. Section 905(b) (WRDA 86) Analysis

1. Study Authority

This Section 905(b) analysis was prepared under the following authorities:

a. Flood Control Act of 1965

The Coast of California Storm and Tidal Waves Study - Ventura/Santa Barbara Counties, California is a continuation of the Coast of California Storm and Tidal Waves Study (CCSTWS), authorized by Section 208 of the Flood Control Act of 1965 (PL 89-298). In that legislation, the Congress recognized that knowledge of processes is a prerequisite to making effective planning and engineering decisions regarding the California coastline. The legislation mandated a series of six regional feasibility phase type studies covering the entire California Coast. The first, the CCSTWS studies of the San Diego Region and Orange County Shorelines were completed in 1992 and 2003, respectively; and a Los Angeles County shoreline study is currently being conducted.

b. Public Law 106-60, September 29, 1999

The Public Law 106-60 States that "*The Committee has included funds to update a Project Study Plan for the Coast of California Storm and Tidal Waves Study, Ventura/Santa Barbara Counties, California".*

2. Study Purpose

The Coast of California Storm and Tidal Waves Study - Ventura/Santa Barbara Counties, California is not intended to look at specific shoreline problems for the purposes of developing specific measures or alternatives for implementation. In keeping with the original Congressional mandate, the study is proposed to develop a Regional Shore Protection/ Sand Management Plan. The development of such a Management Plan will involve the quantification of sediment sources, sinks, and transport characteristics, the quantification and interpretation of past shoreline changes, the establishment and testing of techniques for assessing shoreline response to natural forces and human activity on local and regional bases, and developing a means of rapid dissemination of information from the study to all interested parties, including governmental planning, engineering and regulatory agencies, and others interested in the California Coastline.

The purpose of the Coast of California Storm and Tidal Waves Study - Ventura/Santa Barbara Counties, California 905(b) Reconnaissance Report, which was initiated in August 2002, is to determine if there is a Federal interest in a cost-shared

feasibility study to provide a framework for shore protection, navigation, recreation, storm damage reduction, environmental restoration, and other related shoreline needs along the coastal zone of Ventura/Santa Barbara Counties, California. The purpose of this Section 905(b) (WRDA 86) Analysis is to document the basis for this finding and establish the scope of the study. As the document that establishes the scope of the study, the Section 905(b) (WRDA) Analysis is used as the chapter of the Project Management Plan (PMP), which presents the reconnaissance overview and rationale for plan formulation.

3. Location of Study, Non-Federal Sponsor and Congressional District

a. The study area covers the entire 243 kilometers (151 miles) of Pacific Ocean coastline located within the Counties of Ventura and Santa Barbara in California. This Coast of California Storm and Tidal Waves Study - Ventura/Santa Barbara Counties will emphasize on the eastern 103-kilometer (62-mile) stretch of shoreline, extending from Ellwood to Leo Carrillo State Beach near Sequit Point, that is urbanized and the most heavily populated. The counties are bordered by San Luis Obispo County to the north and Los Angeles County on the southeast.

The coastal morphology of the region is highly diversified. From the San Luis Obispo/Santa Barbara County line to Point Conception, the open coast reaches are composed of a series of long, sandy beaches that are separated by prominent headlands and backed by dunes or low bluffs. This open coast segment is fully exposed to the high-energy Pacific Ocean sea and swell. East of Point Conception, the shoreline changes orientation from north-south to an east-west direction. Consequently, the coastline within the Santa Barbara Channel is sheltered from the prevailing sea and swell and winter storm waves that propagate from the northwest direction. The shoreline east of Point Conception is also partially protected from the less frequently occurring southerly swell because of the blocking effect provided by the Channel Islands. As a result, alongshore sediment transport along this semi-protected section of coast is nearly unidirectional from west to east.

The coastline between Ellwood and Point Mugu is the most urbanized area within the two counties. The beaches from Goleta to Rincon Point are generally narrow and backed by high bluffs. Occasional breaks in the topography accommodate broader pocket sandy beaches that are associated with stream outlets. The Rincon Parkway segment between Rincon Point and Surfers Point in the City of San Buenaventura (Ventura) is characterized by thin pocket beaches backed by a narrow upland terrace and the Coast Range Mountains. Because of the history of development encroachment and shoreline fortification that has occurred, beach widths along the Rincon Parkway are generally narrow or non-existent.

The shoreline between Surfers Point and Point Mugu opens into the broad alluvial plain of the Ventura and Santa Clara Rivers. These two hydrologic features are responsible for supplying most of littoral sediment to this shore segment. Consequently, this subreach contains some of the widest sandy beaches (e.g. Oxnard Shores) within the study area. From Point Mugu to the Ventura-Los Angeles County line, the shoreline is rocky with narrow pocket beaches that are backed by mountains.

Four harbors, Santa Barbara Harbor, Ventura Harbor, Channel Island Harbor and Port Hueneme Harbor, are located within the study region. They play important roles in regulating the littoral transport between Santa Barbara and Mugu Lagoon.

b. The Non-Federal Sponsor for the feasibility phase of this Shoreline Study is the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON).

c. The study area is located in the 23rd and 24th Congressional Districts.

4. Prior Reports and Existing Projects

a. The following reports have been reviewed as part of this study.

1) Federal Studies

The earliest Federal study within the area concerned with shoreline processes was completed on January 15, 1938 (U.S. Army, 1938). Summarizing serious erosion along the coast from Santa Barbara point to the Carpinteria Creek, the field study recommended that the dredged material from Santa Barbara harbor be placed on East Beach for beach restoration. Subsequent supplementary studies were conducted in 1941, 1942, and 1946 to assess the effectiveness of beach restoration by artificial nourishment that was performed in 1940.

A shore protection report to assess the probable effect of proposed harbor improvements being considered at Ventura and Port Hueneme was prepared to in 1940 (U.S. Army, 1940). Field survey data that was collected indicated that shoreline advances between Ventura and Point Hueneme occurred. Northwest of this area the mountainous coastline was concluded to be gradually receding. The shoreline between Port Hueneme and Point Mugu was considered to be stable.

In 1948, a report regarding harbor and shore protection in the vicinity of Port Hueneme was published pursuant to Public Law 525, House Resolution 6407 as approved by the 79th Congress on July 24, 1946 (U.S. Army, 1948). The report was prepared to investigate the serious beach erosion downcoast of Port Hueneme that occurred as a result of jetty improvements constructed at the entrance in 1940. A beach nourishment program with an initial fill of 3.1 million cubic meters (4 million cubic yards) and biennial replenishment of 766,000 cubic meters (one million cubic yards) was concluded to be the preferred mitigation alternative. The report further recommended that a small-craft harbor be constructed upcoast with a sand trap in order to provide sand storage and support the beach maintenance program.

In 1951, a beach erosion control study was conducted on the Santa Barbara/Ventura coastline from Carpinteria to Point Mugu. A report was prepared to assess the characteristics of littoral drift within this coastal segment (U.S. Army, 1951). It was concluded that the littoral drift was predominantly downcoast at a rate ranging from 191,000 m^3/yr (250,000 cy/yr) at Carpinteria to 765,000 m^3/yr (1,000,000 cy/yr) along the Oxnard plain. Fluvial delivery was estimated to be 191,000 m^3/yr (250,000 cy/yr) from streams between Carpinteria and Ventura River and 917,400 m^3/yr (1,200,000 cy/yr) from the Santa Clara River respectively. The report proposed that a groin field be constructed adjacent to Ventura Pier to stabilize an eroding beach condition.

As part of Public Law 286, 84th congress, approved July 28, 1956, Federal assistance was authorized for protection of publicly owned shores with provisional assistance available for privately held areas. As a result of the Act, the Corps inaugurated a continuing cooperative study of the coast of southern California between Cape San Martin and the Mexican border. The purpose of the Study was to determine areas of active or potential erosion, obtain wave and shore process data, evaluate attempts to solve beach erosion problems, and generally determine the overall shoreline conditions within the study limits.

Two interim reports (U.S. Army, 1960 and 1962a), a special interim report on Ventura area (U.S. Army, 1961a), a final report (U.S. Army, 1967), and two three-year reports (U.S. Army, 1969 and 1970a) were prepared. These reports, generally described the shoreline conditions along the Santa Barbara and Ventura coastline and indicated the following findings: 1) the beaches downcoast of Santa Barbara Harbor are dependent upon sand bypassing from the maintenance dredging; 2) severe erosion has occurred at Sandyland Cove (Padero Lane) and remedial protection measures are necessary; 3) Carpinteria Beach State Park is a wide sandy beach that has maintained its stability over the past few years; 4) between Rincon Point and Ventura River, most of the beaches are covered with exposed gravels, boulders, and cobbles, and in some areas a thin layer of sand; 5) the shoreline between the Ventura Pier and the Ventura Harbor is currently a wide stable beach due to the construction of a groin field; 6) the beach between the Santa Clara River and Channel Islands Harbor is relatively stable; 7) the shoreline between Port Hueneme and Point Mugu is generally stable, except at the U.S. Navy facility where erosion is occurring; 8) most of the shoreline beyond Point Mugu to the Ventura-Los Angeles County line is rocky with a few stretches of unstable sandy beach.

In 1978, the Corps of Engineers (U.S. Army, 1978 & 1979) prepared a survey report for Ventura County and performed a shoreline inspection from Santa Barbara to Imperial Beach. The survey report indicated that the shoreline within Ventura County has gradually been eroded. The shoreline investigation showed that major problems exist at Faria and Hobson Beach parks, and Emma Wood State Beach where periodic erosion has threatened public and private property. The erosion problems at Faria and Hobson Beach parks occurred soon after completion of the Highway 101 construction at Seacliff in the early 1970s.

An initial appraisal study was performed from Arroyo Burro Park to Rincon Point in 1986 (U.S. Army, 1986a). The survey report recommended that a reconnaissance study be authorized to assess Federal interest in storm damage prevention at East beach, Miramar beach and Carpinteria beach.

As a result of the 1986 initial appraisal, a reconnaissance study (U.S. Army, 1990) to identify possible storm damage reduction for Federal involvement was prepared for shoreline areas within Santa Barbara County. The study concluded that Federal improvements to reduce storm damages appear to be feasible at Carpinteria Beach and vicinity. However, no local sponsor was identified to cost-share a feasibility study.

In 1994, the Corps of Engineers (U.S. Army, 1994a) prepared a revetment condition survey at the Naval Facilities Engineering Service Center, Port Hueneme, Ventura

County, California. A short-term rehabilitation program to provide for revetment repairs was recommended.

In 1997, the Corps of Engineers (U.S. Army, 1997) conducted a shoreline reconnaissance study within the Ventura and Santa Barbara Counties to evaluate the benefits of providing storm damage and beach erosion protection for the metropolitan areas. Alternative forms of shoreline protection such as beach fill, seawalls, revetments, and offshore breakwaters were proposed and evaluated for their engineering, economic, and environmental feasibility.

In addition to these studies, a number of studies were performed for the four harbors within the study area as listed below.

Santa Barbara Harbor

- Examination of Santa Barbara Harbor, California, H.R. Doc. 348-77th Cong., 1st session (House Document,1941). The study recommended that the existing project for Santa Barbara harbor be modified by installing a fixed sand by-passing facility.

- Review Report For Navigation, Santa Barbara Harbor, California. (U.S. Army, 1961b) The study recommended that the existing project be modified to extend the existing west breakwater, and construct an east breakwater, detached breakwater, entrance channel, turning basin, east channel, center channel, west channel, and a L-shaped anchorage.

- Santa Barbara Harbor, California. H.R. Doc, 518-87th Cong., 2nd sess. (U.S. Army, 1962b). The study report recommended modification of the existing project to enlarge the harbor by breakwater construction and channel and basin dredging.

- Reconnaissance Report Study for Santa Barbara Harbor, (U.S. Army, 1988). The study identified potential solutions to channel maintenance, storm damage reduction, and harbor expansion problems. Six alternatives were proposed to proceed into the feasibility phase.

- Feasibility Study for Santa Barbara Harbor, (U.S. Army, 1993). The study recommended that the existing project authorized by the 1962 River and Harbor Act, be modified to provide a dredge system for the City of Santa Barbara to perform the maintenance dredging within the harbor channel.

Ventura Harbor

- Survey Report for Navigation, Ventura Harbor, (U.S. Army, 1968a). The report recommended entrance improvements to provide safe navigation conditions. A 457-foot long detached breakwater and a 911,600-cubic meter (1,200,000-cubic yard) capacity sand trap were proposed.

- Design Memorandum No.1, (U.S. Army, 1970b). The memorandum summarized the design details recommended in the 1968 report.

- Memorandum for Record, Ventura Model Study, (U.S. Army, 1980). The model study concluded that a spur groin in conjunction with a sand trap may be an effective

barrier to prevent sediment movement into the harbor's entrance channel.

- Reconnaissance study report, Ventura Harbor, (U.S. Army, 1986b). The study identified a potential solution to maintenance and navigation problems. Selected alternatives such as extending the detached breakwater and providing a new sand trap south of the harbor entrance were proposed.

- Feasibility Study, Ventura Harbor, (U.S. Army, 1989a). The study recommended maintenance and navigation project features including a north jetty spur groin, a South Beach groin extension, deepening of the sand trap and entrance channel, and extension to the detached breakwater.

- Basis for Design, Estimate of Cost, Ventura Harbor, (U.S. Army, 1992a). The Basis for Design for navigation improvements to Ventura Harbor was prepared to optimize the National Economic Development (NED) plan recommended in the feasibility report. An optimized design was studied using a three-dimensional hydraulic model.

- Ventura Harbor Sand Bypass System and Regional Beneficial Reuse Expedited Reconnaissance Study (U. S. Army, 1999). An expedited reconnaissance study to evaluate the potential of installing a fixed sand bypassing system at Ventura Harbor and providing a beneficial reuse of the bypassed material within the Ventura and Santa Barbara Counties was completed. The study has progressed to the feasibility level analysis.

Channel Islands Harbor

- Recommendation of Channel Islands Harbor, California, (House Document, 1954), 83rd Congress, 2nd session, Doc. 362. 1954. The House Document authorized a small-craft harbor to support plans to provide for sand by-passing and shore protection works near Port Hueneme Harbor.

- General Design for Harbor and Shore Protection Works near Port Hueneme, California. (U.S. Army, 1957). The General Design plan included two jetties, a detached breakwater, and a sand trap.

- Reconnaissance Report, Channel Islands Harbor, Ventura County, California, (U.S. Army, 1968b). The report recommended the expansion of the Harbor to provide additional space for 1,100 slips.

- Entrance Channel Improvement at Channel Islands Harbor, Oxnard California. (U.S. Army, 1985a). The report assessed the capacity of the existing entrance channel to accommodate boat traffic within the channel.

- Condition Surveys, (U.S. Army, 1989b and 1994b). The surveys collected information concerning the structural condition of the two jetties and the detached breakwater for maintenance and repair purposes.

- Channel Islands Harbor Entrance Channel Study, (U.S. Army, 1992b). This feasibility-type study recommended a combination of two alternatives to improve navigation within the entrance channel to accommodate existing and projected future volumes of boat traffic.

Port Hueneme

- Preliminary Examination Report on Port Hueneme Ventura County, California 1936. This unpublished report concluded that the construction of an artificial land-locked harbor at Port Hueneme is primarily beneficial to the local community.

- Beach Erosion Report on Preliminary Examination of Harbor at Port Hueneme, California 1940. This unpublished report examined the beach erosion downcoast of Port Hueneme. The report recommended that a survey of the Harbor with a view to shore protection be made at Federal expense.

- House Document 362, 83rd Congress, 2nd Session (House Document, 1954). In this document, consideration was given to a plan of mitigating adverse beach erosion downcoast by combining a shore protection project with a small-craft navigation feature.

- General Design for Harbor and Shore Protection Works near Port Hueneme, California. (U.S. Army, 1957). In the report, a plan of improvement for shore protection downcoast from Port Hueneme to remedy the erosion caused by the construction of the harbor's jetties in 1940 was presented.

- Navigation Improvement, Review Report for Navigation Port Hueneme Harbor, Ventura County California. (U.S. Army, 1968c). The report recommended that the existing harbor be adopted as a Federal project and that modernization and expansion of the harbor be authorized.

- Design Memorandum No. 1 Port Hueneme Harbor. (U.S. Army, 1973). The memorandum detailed the design for the authorized improvements to the Central Basin and Channel A.

- Draft Port Hueneme Economic Analysis Survey Report for a General Design Memorandum. (U.S. Army, 1985b). The appraisal report concluded that a fixed sand bypass system would be more economical for downcoast shore protection.

- Lesson Learned Study. (U.S. Army, 1985c). A review of the Port Hueneme jetties was conducted. The investigation concluded that Port Hueneme Harbor is well protected from wave activity because of its location at the head of the Hueneme submarine canyon.

- Draft Reconnaissance Report, Port Hueneme Harbor, Ventura County, California, (U.S. Army, 1994c). The Reconnaissance study was prepared to evaluate the benefits associated with establishing and maintaining a new project depth to accommodate deeper draft commercial ships.

- Comprehensive Condition Survey for Entrance Jetties, Port Hueneme, September. (U.S. Army, 1995). The investigation concluded that damages occurred on the ocean side of the east jetty from the head to the bend. It also recommended that a monitoring program be established for the jetties.

2) Non-Federal Studies

The following studies conducted by various local agencies were also reviewed as part of this study:

A beach erosion study was prepared by the City of Carpinteria (1982) to develop alternatives for beach erosion prevention. The study also addressed siting for a proposed recreational pier.

The City of Carpinteria has prepared an annual summary for its winter protection berm project since 1986. Each year, the city constructs a 1,450-foot sand berm between Linden Avenue and Ash Avenue to provide storm damaged protection between the months of December and April. Each annual report includes the project description, sand berm volume calculations, beach profile surveys and biological reports related to the grunion surveys (City of Carpinteria, 1986-2001).

A coastal sand management plan was prepared by Noble Consultants, Inc. (1989) for the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON). The purpose of the study was to develop an understanding of the coastal processes within the Santa Barbara and Ventura County coastline and provide a regionally coordinated program to manage existing sand sources. Offshore sand sources were identified and preferred plans for beach nourishment were recommended in the study.

The City of San Buenaventura conducted a study to review the shoreline erosion history and coastal processes at the City's Marina Park (Noble Consultants, Inc., 1988). The long term and short term erosion characteristics were analyzed and alternative measures were recommended.

The City of San Buenaventura conducted a shoreline erosion study at Surfer's Point. Alternative shoreline erosion management strategies were proposed to address a chronic erosion condition (Noble Consultants, Inc., 1995). Subsequently, a conceptual design study was conducted to develop a preferred alternative of managed shoreline retreat to protect a very popular bike path, pedestrian walkway, public parking areas, sensitive dune habitat, and beach access (Noble Consultants, Inc., 2000).

The County of Santa Barbara (1996) conducted a series of studies to identify various environmental impacts associated with a seawall project at Isla Vista. The seawall was proposed to prevent further erosion of the coastal bluff. Various coastal impacts such as shore erosion, and coastal lateral access were assessed.

A bluff erosion analysis between Point Conception and Santa Barbara was conducted to estimate the sediment contribution (Diener, 2000). Based upon historical aerial photographs and other information, it was concluded that bluff erosion supplies approximately 81,000 m^3/yr (106,000 cy/yr) of sand to the littoral cell between Point Conception and Santa Barbara.

A beach demonstration nourishment project is currently proposed by BEACON to place approximately 77,000 cubic meters (100,000 cy) of material at Goleta Beach to alleviate a severe erosion condition. Field survey work to locate a suitable source of offshore borrow material was completed (Noble Consultants Inc., 2001).

A long-term plan for beach restoration and shoreline erosion management at Goleta Beach County Park was prepared by the County of Santa Barbara (Moffatt & Nichol Engineers, 2002). The purpose of this plan study was to 1) maintain a recreational beach and easy beach access; 2) improve environmental conditions within the park including the Goleta Slough; and 3) protect the supporting parking lot, buildings, and utilities infrastructures within the park.

A report on the future need for beach nourishment in California and the effectiveness of past projects was prepared by the Department of Boating and Waterways and State Coastal Conservancy in 2002 (State of California, 2002). The report summarized the economic value of beach nourishment projects to the State's economy. In order to restore the State's beaches, a restoration cost of approximately $120 million for initial construction and $27 million for annual maintenance was identified. The report also summarized the processes of natural supply of sediment to the coast and ways to reduce current sand delivery deficits caused by historical development and urbanization of the tributary watersheds. Removal of dams or bypassing sand around the barriers was concluded to be a principal action for consideration that would lessen future dependency on artificial beach nourishment.

b. This study is investigating the potential modifications to the following project(s):

Not applicable

5. Plan Formulation

During a feasibility phase study, the formulation of solutions to specific problems is guided by six planning steps set forth in the Water Resource Council's Principles and Guidelines. However, for this Shoreline Study, the planning steps are modified as: 1) specify problems and opportunities; 2) inventory and forecast of coastal use; 3) understanding of regional coastal processes; 4) formulate regional sand management plans; 5) compare alternative plans, and 6) select a recommended plan. The scope of data called for under these six steps shall guide the gathering and presentation of information resulting from the Santa Barbara/Ventura Counties Shoreline Study, to assure that the resulting products can be of use to the local sponsor and other potential coastal planners.

a. National Objectives

1) The development and preparation of products under the CCSTWS - Ventura/ Santa Barbara Counties, California will be pursued considering the national or Federal objective of water and related land resources planning. This national objective is to contribute to the national economic development consistent with protecting the nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements. Contributions to National Economic Development (NED) are increases in net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct benefits that accrue in the planning area and the rest of the nation. Considering this objective will assure that study data is complete and adequate for whatever purposes it may serve in the future.

2) The Corps of Engineers has added a second national objective for Ecosystem Restoration in response to legislation and administration policy. This objective, which will also be considered during the course of the study, is to contribute to the nation's ecosystems through ecosystem restoration, with contributions measured by changes in the amounts and values of habitat.

b. Public Concerns

A number of public concerns have been identified during the reconnaissance study. Initial concerns were expressed in the study authorization. Additional input was received through coordination with the BEACON Joint Powers Authority and its member agencies in Ventura and Santa Barbara Counties. The public concerns related to the establishment of planning objectives and planning constraints are:

1) Preservation and maintenance of sandy beaches is a high priority. To that end, it is desirable to better understand the regional coastal processes so that the performance of beach nourishment projects and management of existing sand bypass facilities can be improved.

2) Episodic storm events along the coastline result in repeated damages to public and private facilities and pose additional public safety concerns.

3) Degradation of existing conditions adversely impact recreational beach opportunities and fosters the continued nearshore encroachment of public and private structures.

4) Shoreline management strategies should be implemented that are not detrimental to the existing marine resources.

c. Problems and Opportunities

The evaluation of public concerns often reflects a range of needs perceived by the public, and described in the context of problems and opportunities that can be addressed through water and related land management plans. For each problem and opportunity, the existing conditions and the expected future conditions are described, as follows:

1) Storm damages

Damages associated with storm tidal surge and increased wave intensity during episodic storm events is a primary concern in Ventura/Santa Barbara Counties. Past events have caused extensive damages to both public and private facilities and have adversely impacted recreational beach opportunities. The severe storms the occurred during the 1983 El Nino season caused approximately $41 million in direct losses along the South Coast Region including both Santa Barbara and Ventura Counties (. Public piers were destroyed; harbor breakwaters were breached; and residential and commercial properties were severely damaged. Overwash associated with wave runup carries suspended sand further landward beyond the existing beach berm into existing roadways and coastal properties.

2) Beach Degradation

The majority of beaches within the Ventura and Santa Barbara County study area, with the exception of those in the Oxnard Plain, are narrow and ephemeral. Thus, lateral beach access is limited. The malnourished beaches continue to erode resulting in a reduction of dry beach width, increase in damages inflicted by storm activity, and decreased recreational beach benefits. The dry beach acts as a protective buffer zone to adjacent roadways, infrastructure, and other public and private facilities. Therefore, if the beaches are maintained and adequate dry beach widths sustained, the environmental and economic impacts associated with episodic storm event damages are projected to decline significantly.

d. Planning Objectives

The standard objectives of conventional feasibility studies of coastal problems do not apply to the products mandated under Coast of California Storm and Tidal Waves Study authorities and guidelines. The planning objectives for the CCSTWS - Ventura/ Santa Barbara Counties, California are specified as follows:

1) To develop an integrated coastal processes database including the quantification of controlling coastal processes and potential long-term shoreline evolution trends to aid in future study and project implementation.

2) To implement a regional shore protection and sand management plan to preserve and/or enhance existing beaches and mitigate coastal erosion and storm damage potential.

3) To reduce coastal storm-related damage to public and private properties and increase recreational beach opportunities.

e. Planning Constraints

Unlike planning objectives that represent desired positive changes, planning constraints represent restrictions that should not be violated. Planning constraints which should be factored into study products, are as follows:

1) Compliance with BEACON goals and objectives and Ventura and Santa Barbara County coastal plans and applicable City Local Coastal Plans.

2) Compliance with various regulatory agencies must be included in study products. The agencies include the California Coastal Commission, California State Lands Commission, California Regional Water Quality Control Boards, California Department of Fish and Game, U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and regulations and planning guidelines of the Corps of Engineers.

f. Tasks to Address Planning Objectives

The study area's coastal morphology and land uses are diverse. The character of the shoreline varies from non-existent beaches and rocky coast to expanses of wide sandy berms. Incident wave energy, the principal driving force of the littoral sediment, similarly varies from full open coast exposure to semi-protected conditions. Land uses

range from non-populated reaches to metropolitan areas. The urbanized coast along the eastern end of the study area was developed within the past century. The population growth and infrastructure development has in some cases altered the natural system and created a dependence of continued human intervention to maintain healthy beaches. Thus, a number of important issues and questions exist that require a better understanding of the relevant coastal processes, quantification of the key physical processes, and formulation of appropriate shoreline management strategies.

The study products that are intended to respond to the planning objectives, include:

1) Identification and Evaluation of the Coastal Processes Components

To gain detailed knowledge of the nearshore coastal processes, the identification and evaluation of historical records and additional data collection is necessary. Because of the diverse nature of the littoral environment throughout the study area and the interdependency of adjoining areas, the shoreline will be discretized into a number of littoral segments. This level of detail will be directed toward better quantifying the regional sediment budget of the Ventura/Santa Barbara Counties coastline and the movement of sand along the coast.

The broad sub-reach boundaries shall consist of the following segments: San Luis Obispo County/ Santa Barbara County line to Point Sal, Point Sal to Point Conception, Point Conception to Goleta, Goleta to the Santa Barbara County/ Ventura County line, Ventura County line to the Ventura River, Ventura River to the Santa Clara River, Santa Clara River to Channel Islands Harbor, Silver Strand Beach between Channel Islands Harbor and Port Hueneme, Port Hueneme Harbor to Mugu Lagoon, and Mugu Lagoon to the Ventura County /Los Angeles County line.

An understanding of the spatial and temporal sediment transport dynamics within these different reaches and their interdependence with one another is the first crucial step in developing a detailed sediment management strategy. A State-of-the-Coast Summary Report shall be prepared that includes baseline information on storm damages in recent years, public use of the shoreline, and coastal access. In addition, the study shall address all coastal relevant sediment budget categories and driving coastal process mechanisms including sediment sources, sediment sinks, sediment entrapment and wave climate.

Historical and Future Data Collections

All previous data collections pertaining to Ventura/Santa Barbara Counties will be obtained and evaluated. These include aerial and ground photography, beach profile survey data, side scan sonar and bathymetry, sediment samples, and historical shoreline and volumetric changes. In addition, future data collections shall be conducted to supplement the data the earlier investigations. Additional data collection efforts shall include beach profile surveys, aerial photography, oceanographical data collection, and sediment sampling. All reviewed data will be integrated into the Geographic Information System (GIS) database for future reference and use.

Sediment Sources

Better definition of the spatial and temporal variation of natural sediment delivery to the coastline will be an important study task. Principal sediment sources within the Ventura and Santa Barbara Counties include fluvial sediment discharge from the tributary mountain creeks and more extensive river watersheds, sediment yield that results from bluff erosion, the natural onshore migration of sand from offshore deposits, and artificial nourishment. The major rivers, creeks, and streams transporting sediment to the open coast will be investigated. The bluff erosion rate and the associated delivery of sediment to the nearshore coastal region are of primary interest between Point Conception and Santa Barbara. In addition, sediment distributed along the shoreline through beach restoration projects will be quantified. The volume of onshore sediment migration is difficult to quantify by current standard coastal engineering and science practices. However, by evaluating historic and future profile surveys and bathymetric data, this value may be approximated.

Sediment Sinks

Understanding where and how losses of littoral transport occur within the study area is an important task. Permanent removal of sand from the natural littoral system can occur at headlands, at the Mugu Submarine Canyon, as a result of storm related offshore transport processes and overwash, and material carried inland by wind. The investigation of the sediment sinks will involve utilization of historical and recent bathymetric data of the submarine canyons, storm damage assessments, and beach profile surveys. This data will be supplemented with additional analysis and data collection to quantify the episodic nature of the phenomenon.

Sediment Entrapment

The Santa Barbara County and Ventura County coastline contains numerous natural and artificial structures that impact the alongshore sediment transport process. The mountainous coastline areas are comprised of a series of headlands and pocket-like beaches. The extent of blocking that headlands pose, the semi-protection afforded by the recessed embayments, and the availability of sand within the system can result in significant disruptions to downcoast sand supply. Goleta Beach and areas along the Rincon Parkway will be studied to learn how sand transport may be impeded within these features.

Man-made structures, fortification of the shoreline, and the historical encroachment of development within the littoral zone will be studied for their roles in sediment transport interruption. Manipulation of the littoral system is most prominent at the four harbors within the study area (Santa Barbara, Ventura, Channel Islands, and Port Hueneme). The management of sand bypassing that occurs will be studied to indicate how best to block sand from shoaling the harbors and return it effectively to the natural littoral system. Similarly, the Highway 101 encroachment that was completed in 1971 at Seacliff will be investigated for its impacts on downcoast beaches.

Wave Climate

Wave climate information is required to provide a basic understanding of the oceanographic characteristics of the nearshore coastal region. Wave information taken

from various buoy locations offshore will be analyzed to statistically determine the deepwater wave characteristics as represented by wave height, period, and angle of incidence. Numerical wave transformations shall be computed to obtain the nearshore wave characteristics. In addition, nearshore wave gage(s) will be deployed to verify the validity of the computed results of the simulated wave characteristics of sea and swell. This data will be used to describe the spatial variation of wave energy through the study area. The results shall also be used to quantify the temporal and spatial variation of long-term alongshore sediment transport and storm induced episodes of short-term cross-shore beach erosion. These results will aid in the development of a model that simulates the movement of sand throughout the system and the resultant shoreline responses that may be expected.

2) Development of a Shoreline Response Model

The information obtained through the identification and evaluation of nearshore coastal processes will be compiled to develop a numerical simulation model that can be used as a forecasting tool for predicting potential effects of storm damage on volumetric changes and shoreline response. The development of this tool will be a crucial asset in the design and implementation of future beach nourishments and sediment management plans. In addition, a water level planning map derived from the estimated wave runups under storm eroded beach conditions shall be included.

3) Implementation of a Regional Sediment Management and Monitoring Plan

Upon completion of the coastal process analysis and the development of a shoreline response model, a regional sediment management and monitoring plan will be formulated for the Ventura and Santa Barbara Counties coastline. The plan will focus on ways and means to promote more effective preservation and enhancement of beaches, improve storm damage reduction benefits, and increase recreational beach opportunities.

g. Preliminary Effort

Preliminary effort under the 905(b) Reconnaissance Study indicates that the proposed study will result in significant progress toward understanding the regional coastal processes that affect the stability and dynamic evolution of the Santa Barbara County and Ventura County coastline. This understanding will allow important predictive models to be developed. These tools will also allow simulation of the nearshore coastal responses to be performed for a variety of input conditions. As a result of a better understanding of the episodic and cyclical nature of the region's coastal dynamics can result, and more enlightened predictions and engineering proposals can be made that will form the foundation of a detailed regional sediment management and monitoring program. The study results will determine the effectiveness of beach nourishment as a shoreline management tool and appropriate measures to prolong the longevity of individual placements.

The likely array of alternatives that will be investigated in the Study are as follows:

Coastal Processes Identification & Evaluation	Coastal Processes Model Development	Sediment Management & Monitoring program
1. Historic/Present Data With GIS Integration	1. Nearshore Wave Climate	1. Management Strategy
2. Sediment Sources	2. Sediment Transport Flux	2. Monitoring Program
3. Sediment Sinks	3. Shoreline Response	
4. Sediment Entrapment		
5. Wave Climate		

The CCSTWS State-of-the-Coast Reports have been completed for San Diego and Orange Counties and the CCSTWS Study of the Los Angeles County Shoreline is proceeding to feasibility status. These studies were authorized to gain a better understanding of the littoral coastal system in their respective regions and have proved pivotal in the design and implementation of storm damage reduction measures. Following the success of these CCSTWS efforts, it is evident that all phases of the identification, evaluation, management, and monitoring criterion for Ventura/Santa Barbara Counties have the potential for implementation. The magnitude of the benefits from this type of study will be substantial. A detailed knowledge of the existing conditions will be obtained that will provide an extensive database of information for future investigations and project action. Based on the findings anticipated from the study, protective strategies and beach enhancement measures can be implemented through a regional sediment management strategy. This end product would protect against the occurrence of future shoreline damages and increase the recreational beach benefits of the coastal region.

6. Federal Interest

Achieving a high level of beach stabilization to promote storm damage reductions in the coastal region is an output with a high budget priority that can be achieved through the evaluation process in this study. Because of significant amounts of physical damages to public and private facilities throughout Ventura/Santa Barbara Counties associated with episodic storm events, there is a strong Federal interest in continuing to a study following this expedited reconnaissance study. The proposed study shall evaluate coastal process components, develop a shoreline response model, and formulate a regional management and monitoring plan. The development of a detailed coastal database for future investigations, and the additional potential for recreational beach opportunities that will be created under this study are also in the Federal interest. Therefore, the study will generate potential project goals consistent with U.S. Army Corps of Engineers policies and guidelines, costs and benefits objectives, and environmental impact assessments.

7. Preliminary Financial Analysis

As the Non-Federal Sponsor, BEACON is aware of the requirement to provide 50% of the cost of the feasibility phase study. A letter of intent from BEACON stating willingness to pursue the feasibility phase study and share in its cost, and an understanding of the cost sharing that is required for future actions is included as Attachment 1.

8. Assumptions and Exceptions

a. Feasibility Phase Assumptions.

The following critical assumptions will provide a basis for the feasibility study:

1). Without-Project Condition Assumptions. The recurrence of damages to public and private facilities associated with episodic storm events is expected to continue. As the narrow beaches of Ventura/Santa Barbara Counties continue to erode, the damage potential will intensify. Additional recreational beach benefits will be adversely impacted and the nearshore coastal environment will continue to deteriorate at an increasing rate. Therefore, the planning objectives and the subsequent mitigation measures proposed are economically justified.

2). Policy Exceptions and Streamlining Initiatives. The study will be conducted in accordance with the Principles and Guidelines and Corps of Engineers regulations. Exceptions to established guidance have been identified, which will streamline the feasibility study process without adversely impacting the study quality. No policy exceptions result from the approval of the Section 905(b) Analysis by HQUSACE.

b. Other Approvals Required.

No other items such as studies and new benefit categories require HQUSACE's approval.

9. CCSTWS Phase Milestones

The total duration of the proposed Study is estimated to be 5 years. The following table lists the schedule of key milestones for this feasibility study. A detailed milestone description for each task will be provided in the Project Management Plan (PMP).

Milestone	Description	Duration (mo)	Cumulative (mo)
Milestone F1	Initiate Study	0	0
Milestone F2	Public Workshop/Scoping	1	1
Milestone F3	CCSTWS Scoping Meeting	2	3
Milestone F4	Sand Management Plan Review Conference	28	31
Milestone F4A	Sand Management Plan Formulation Briefing	2	33
Milestone F5	Draft CCSTWS Report	4	37
Milestone F6	Final Public Meeting	1	38
Milestone F7	CCSTWS Review Conference	1	39
Milestone F8	Final Report to SPD	4	43
Milestone F9	DE's Public Notice	1	44
-	Chief's Report	2	46
-	Project Authoriztion	2	48

Note: Sand Management Plan Review (F4) consists of 1) coastal processes identification and evaluation; 2) coastal processes model development; and 3) sediment management and monitoring program

10. CCSTWS Cost Estimate

The estimated cost of this Study is summarized in the following table.

WBS#	Description	Cost
JAA00	Feas - Surveys and Mapping except Real Estate	650,000
JAB00	Feas - Coastal Studies/Report	915,000
JAC00	Feas - Geotechnical Studies/Report	225,000
JAE00	Feas - Engineering and Design Analysis Report	105,000
JI000	Feas - Public Involvement Documents	90,000
JJ000	Feas - Plan Formulation and Evaluation	70,000
JL000	Feas - Final Report Documentation	75,000
JLD00	Feas - Technical Review Documents	75,000
JM000	Feas - Washington Level Report Approval (Review Support)	50,000
JPA00	Project Management and Budget Documents	70,000
JPB00	Supervision and Administration	230,000
JPC00	Contingencies	225,000
L0000	Project Management Plan (PMP)	0
Q0000	PED Cost Sharing Agreement	0
Total		$2,780,000

11. Views of Other Resource Agencies

Because of the funding and time constraints of the reconnaissance phase, only limited and informal coordination has been conducted with other resource agencies. Based upon the current data deficiencies and limited knowledge regarding the coastal processes of Ventura/Santa Barbara Counties, views from various local municipalities include the desire to preserve beaches, minimize use of structural shoreline stabilization measures, and protect nearshore marine habitats.

12. Potential Issues Affecting Initiation of Feasibility Phase

a. Continuation of this study into the cost-shared feasibility-level study phase is contingent upon an executed Feasibility Cost-Sharing Agreement (FCSA). Failure to achieve an executed FCSA within 18 months of the approval of the Section 905(b) Analysis will result in termination of the study. There are no apparent issues at this time that impact on the implementation of the feasibility phase.

b. The schedule for signing the Feasibility Cost-Sharing Agreement is October 2003. Based on the schedule of milestones, completion of the Coast of California Storm and Tidal Waves Study (CCSTWS)- Ventura/Santa Barbara Counties report would be in March 2008, with a potential Congressional Authorization in WRDA 2008.

13. Project Area Map

A map of the study area is shown in Enclosure A.

14. Recommendations.

I recommend that the Coast of California Storm and Tidal Waves Study (CCTWS) - Ventura/Santa Barbara Counties proceed to the feasibility phase.

Date: _____

Richard G. Thompson
Colonel, Corps of Engineers
District Engineer

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Letter of Intent

Attachment 1

Chapter 3. Work Breakdown Structure

Levels of the Work Breakdown Structure

The work breakdown structure is divided into the following five levels.

Level 1. The Project

Level 2. The Subprojects are established by the phase that is appropriated by Congress – in this case the CCSTWS study. This level includes the major products generated in the feasibility-type phase: the Coast of California Storm and Tidal Waves Study Report, the Project Management Plan and the PED Agreement, which are identified in the first character of the work breakdown structure code.

Level 3. The Parent Tasks are generally identified as separate products that go into the final study documentation. Examples of these subprojects include such items as the geotechnical studies report, the coastal studies report, etc. These parent tasks are normally identified with the responsibility of a particular functional organization. This level is generally identified in the second and third characters of the work breakdown structure code.

Level 4. The Tasks are major separable elements of the subprojects that are keyed to separately identifiable products that are developed for the major study milestones. These tasks are elements of work resulting in a deliverable product which have a beginning and an end, may be accomplished within one functional organization, can be described at a work order of detail and are the lowest level that will be specifically tracked with respect to cost and schedule. As an example, the cost estimates for the draft study report would be an example of a task. Tasks can be described as the summation of activities that would be accomplished by a particular functional organization between two of the milestone events. The milestone tasks and definitions are included in Enclosure B. The following durations between milestones are generally used for the establishment of tasks.

1. Between Milestone F1 and F3
2. Between Milestone F3 and F4
3. Between Milestone F4 and F4A
4. Between Milestone F4A and F5
5. Between Milestone F5 and F8
6. Between Milestone F8 and F9

Level 5. The Activities are separate elements of work that are managed by the functional managers to whom the tasks are assigned and which may not necessarily

result in a deliverable work product to another organization. These activities are not tracked separately in terms of cost and schedule but are described in the scopes of work to the extent required to provide a clear understanding of the work required.

Listing Of Tasks - Work Breakdown Structure

In accordance with the levels above, the following work breakdown structure indicates subprojects and parent tasks in bold type, followed by the subordinate tasks.

WBS#	Description
J0000	**Feasibility Report (Feas)**
J0000	**Milestones**
	Initiate Study
	CCSTWS Public Workshop (F2)
	CCSTWS Scoping Meeting (F3)
	Sand Management Plan Review Conference (F4)
	Sand Management Plan Formulation Briefing - AFB
	Draft CCSTWS Report
	Final Public Meeting
	CCSTWS Review Conference
	CCSTWS Final Report
	MSC Commander's Public Notice
	Chief's Report to ASA (CW)
	ROD Signed or FONSI Signed
	President Signs Authorization
JA000	**Engineering Appendix**
JAA00	**Feas - Surveys and Mapping except Real Estate**
	Surveys & Mapping - Lidar (SHOALS) Survey
	Surveys & Mapping - Beach Profile Surveys
	Surveys & Mapping - GIS Integrations
	Surveys & Mapping - AFB Documentation
	Surveys & Mapping - Draft Report
	Surveys & Mapping - Final Report
JAB00	**Feas - Coastal Studies/Report**
	Coastal - Data Collection and Review
	Coastal - Sediment Source Investigations
	Coastal - Supplemental Institutional Cobblestone Dynamics Investigation
	Coastal - Sediment Sink Investigations
	Coastal - Sediment Entrapment Investigations
	Coastal - Nearshore Wave Climatology Investigations
	Coastal - Storm-Related Coastal Flooding Analysis
	Coastal - Shoreline and Volumetric Changes Evaluations
	Coastal - Sediment Budget Analysis
	Coastal - AFB Documentation
	Coastal - Draft Report
	Coastal - Final Report

Listing of Tasks - Work Breakdown Structure Continued

WBS#	Description
JAC00	**Feas - Geotechnical Studies/Report**
	Geotech - Data Collection and Review
	Geotech - Geotechnical Seacliff Studies
	Geotech - AFB Documentation
	Geotech - Draft Report
	Geotech - Final Report
JAE00	**Feas - Engineering and Design Analysis/Report**
	Engr & Design - Development of a Regional Coastal Sediment Management Plan (RCSMP)
	Engr & Design - AFB Documentation
	Engr & Design - Draft Report
	Engr & Design - Final Report
JB000	**Feas - Socioeconomic Studies**
	Not Applicable
JC000	**Feas - Real Estate Analysis/Report**
	Not Applicable
JD000	**Feas - Environmental Studies/Report (Except USF&WL)**
	Not Applicable
JE000	**Feas - Fish and Wildlife Coordination Act Report**
	Not Applicable
JF000	**Feas - HTRW Studies/Report**
	Not Applicable
JG000	**Feas - Cultural Resources Studies/Report**
	Not Applicable
JH000	**Feas - Cost Estimates**
	Not Applicable
JI000	**Feas - Public Involvement Documents**
	Initial Public Meeting
	Public Workshops in Support of Plan Selection
	Public Involvement Support to AFB
	Final Public Meeting
	Public Involvement Support to FRC
JJ000	**Feas - Plan Formulation and Evaluation**
	Plan Formulation and Evaluation of Regional Coastal Sediment Management Plan (RCSMP)
	Plan Formulation and Evaluation - AFB Documentation
	Plan Formulation and Evaluation - Draft Report
	Plan Formulation and Evaluation - Final Report
	Plan Formulaton and Evaluation - Support to Division Commander's Notice

Listing of Tasks - Work Breakdown Structure Continued

JL000	**Feas - Final Report Documentation**
	Reproduction and Distribution of F3 Documentation
	Reproduction and Distribution of F4 Documentation
	Reproduction and Distribution of AFB Documentation
	Reproduction and Distribution of Draft Report
	Reproduction and Distribution of Final Report
JLD00	**Feas - Technical Review Documents**
	Independent Technical Review - F3 Documentation
	Independent Technical Review - F4 Documentation
	Independent Technical Review - AFB Documentation
	Independent Technical Review - Draft Report
	Independent Technical Review - Final Report
JM000	**Feas - Washington Level Report Approval (Review Support)**
JP000	**Feas - Management Documents**
JPA00	**Project Management and Budget Documents**
	Programs and Project Management to Support F3 Milestone
	Programs and Project Management to Support F4 Milestone
	Programs and Project Management - AFB Documentation
	Programs and Project Management - Draft Report
	Programs and Project Management - Final Report
	Programs and Project Management - DE's Notice
JPB00	**Supervision and Administration**
	S&A - Planning Division
	S&A - Engineering Division
	S&A - PPMD
	S&A - Contracting Division
JPC00	**Contingencies**
L0000	**Project Mangement Plan (PMP)**
	PMP - Draft PMP
	PMP - Final PMP
Q0000	**PED Cost Sharing Agreement**

Chapter 4. Scopes of Work

Detailed Scopes of Work

For each task that is included in the work breakdown structure, a scope of work is developed that describes the work that is to be performed. For each task, the scope describes the work, including specific activities, to be accomplished in narrative form. The scopes of work have been developed by the study team, which includes representatives of BEACON. The scope also reflects the policy exceptions and streamlining initiatives that have been approved in the Section 905(b) (WRDA) Analysis. The detailed scopes of work for the study are organized by parent task in Enclosure C.

Durations of Tasks

The task durations are entered into the project's network analysis system (NAS) to develop the schedule that is included in Chapter 6 – Study Schedule. The durations are based on negotiations between the Project Manager and the chiefs of the responsible organizations, as identified in Chapter 5 – Responsibility Assignment.

Costs of Tasks

Lastly, the scopes of work for the tasks are grouped by the parent tasks that they support. The total cost estimates for the parent tasks are then combined in the Study Cost Estimate – Chapter 7. The cost estimates for the tasks are also based on negotiations between the Project Manager and the chiefs of the responsible organizations.

Chapter 5. Responsibility Assignment

Organizational Breakdown Structure

The scopes of work represent agreements between the Project Manager and first line supervisors of functional organizations. The functions of these organizations in support of the project are defined by the work that is assigned. All organizations responsible for tasks, including BEACON and other agencies, are included with their organization codes in the following Organizational Breakdown Structure (OBS).

Los Angeles District	**Org Code**
Planning/Coastal Studies Group	CESPL-PD-WS
Engineering/Coastal Engineering Section	CESPL-ED-DC
Engineering/Geology & Investigations Section	CESPL-ED-GG
Engineering/Survey & Mapping Section	CESPL-ED-GS
Engineering/Cost Engineering Unit	CESPL-ED-CE
PPMD/Civil Projects Branch	CESPL-PM-C

Non-Federal Sponsor	**Org Code**
County of Ventura	
County of Santa Barbara	

Other Agencies/Other Corps	**Org Code**
Not Applicable	

Responsibility Assignment Matrix

The scopes for each task are grouped by the parent task that they support and the primary responsible organization for each parent task is identified by the organization codes in the following Responsibility Assignment Matrix (RAM).

WBS#	Description	District Org	Non-Fed	Other
JAA00	Feas - Surveys and Mapping except Real Estate	CESPL-ED-GS		
JAB00	Feas - Coastal Studies/Report	CESPL-ED-DC		
JAC00	Feas - Geotecnical Studies/Report	CESPL-ED-GG		
JAE00	Feas - Engineering and Design Analysis Report	CESPL-ED-DC		
JI000	Feas - Public Involvement Documents	CESPL-PD-WS		
JJ000	Feas - Plan Formulation and Evaluation	CESPL-PD-WS		
JL000	Feas - Final Report Documentation	CESPL-PD-WS		
JLD00	Feas - Technical Review Documents	CESPL-PD-WS		
JM000	Feas - Washington Level Report Approval (Review Support)	CESPL-PD-WS		
JPA00	Project Management and Budget Documents	CESPL-PM-C		
JPB00	Supervision and Administration	All		
JBC00	Contingencies	Not Assigned		
L0000	Project Management Plan (PMP)	CESPL-PD-WS		
Q0000	PED Cost Sharing Agreement	CESPL-PD-WS		

Chapter 6. Study Schedule

Schedule Development

All schedules are developed using a Network Analysis System (NAS). The network is based upon the tasks that are listed in Chapter 3 – Work Breakdown Structure and the durations that are included in the detailed scopes of work in Enclosure C – Detailed Scopes of Work. Major milestones that are defined in Enclosure B – CESPD Milestone System are also included in the schedules.

Funding Constraints

Funding for the first Fiscal Year of the study is normally limited because of the uncertainty in the initiation of the feasibility-type study. This constraint has been reflected in the development of the study schedule. Following the first year, an optimum schedule based upon unconstrained funding has been assumed for subsequent Fiscal Years.

Non-Federal Sponsor Commitments

Milestones become commitments when the project manager meets with the Non-Federal Sponsors, the BEACON, at the beginning of each Fiscal Year and identifies two to five tasks that are important for the Los Angeles District to complete during the Fiscal Year. These commitments will be flagged in the PROMIS database and monitored and reported on accordingly.

Milestone Schedule

The milestone schedule in the CESPD Milestone System for this Coast of California Storm and Tidal Waves Study for Ventura and Santa Barbara Counties is as follows:

Milestone	Description	Starting Date	Completion Date
Milestone F1	Initiate Study	01-Dec-03	01-Dec-03
Milestone F2	CCSTWS Public Workshop	01-Dec-03	31-Dec-03
Milestone F3	CCSTWS Scoping Meeting	02-Jan-04	02-Mar-04
Milestone F4	Sand Management Plan Review Conference	03-Mar-04	21-Jun-06
Milestone F4A	Sand Management Plan Formulation Briefing	22-Jun-06	21-Aug-06
Milestone F5	Draft CCSTWS Report	22-Aug-06	20-Dec-06
Milestone F6	Final Public Meeting	21-Dec-06	22-Jan-07
Milestone F7	CCSTWS Review Conference	23-Jan-07	22-Feb-07
Milestone F8	CCSTWS Final Report to SPD	23-Feb-07	22-Jun-07
Milestone F9	DE's Public Notice	25-Jun-07	25-Jul-07
-	Chief's Report	26-Jul-07	24-Sep-07
-	Project Authorization	25-Sep-07	23-Nov-07

Chapter 7. Study Cost Estimate

Basis For The Cost Estimate

The CCSTWS cost estimate for Ventura and Santa Barbara Counties is based upon a summation of the costs that were identified for the individual tasks in the detailed scopes of work that are included in Enclosure C – Detailed Scopes of Work. Study cost estimates include allowances for inflation so that the BEACON are fully aware of their financial commitments.

Appropriate contingencies and contingency management are included to adequately deal with the uncertainty in the elements of the study. Experience has shown that approximately 20% of the study costs should be reserved for activities following the release of the draft report. Contingencies in the amounts required to cover the costs of these activities have been added to the cost estimate.

Costs for Federal and Non-Federal Activities

BEACON must contribute 50% of the cost of the study during the period of the study. Not more than one-half of this Non-Federal share may be made through the provision of services, materials, supplies or other in-kind services necessary to complete the study and prepare the feasibility report. The following CCSTWS study cost estimate includes credit for work that is to be accomplished by BEACON.

Summary of Costs

WBS#	Description	Federal Cost	Non-Fed In-Kind	Total Cost
JAA00	Feas - Surveys and Mapping except Real Estate			$650,000
JAB00	Feas - Coastal Studies/Report			$915,000
JAC00	Feas - Geotechnical Studies/Report			$225,000
JAE00	Feas - Engineering and Design Analysis/Report			$105,000
JI000	Feas - Public Involvement Documents			$90,000
JJ000	Feas - Plan Formulation and Evaluation			$70,000
JL000	Feas - Final Report Documentation			$75,000
JLD00	Feas - Technical Review Documents			$75,000
JM000	Feas - Washington Level Report Approval (Review Support)			$50,000
JPA00	Project Management and Budget Documents			$70,000
JPB00	Supervision and Administration			$230,000
JPC00	Contingencies			$225,000
L0000	Project Management Plan (PMP)			$0
Q0000	PED Cost Sharing Agreement			$0
Totals of Federal and Non-Federal Work		**$2,085,000**	**$695,000**	**$2,780,000**
Adjustment for Required Non-Federal Cash		**-$695,000**	**$695,000**	**-**
Total Federal and Non-Fedeal Costs		**$1,390,000**	**$1,390,000**	**$2,780,000**

Chapter 8. Quality Control Plan

Quality Control Plan Objective

The quality control objective is to achieve study phase documents and services that meet or exceed customer requirements, and are consistent with Corps of Engineers policies and regulations.

Guidelines Followed For Technical Review

The guidelines for Independent Technical Review (ITR) are set forth in the South Pacific Division Quality Management Plan, and in the corresponding Los Angeles District Quality Management Plan.

Coast of California Storm and Tidal Waves Study Team for Ventura/ Santa Barbara Counties

Organization/Function	Name/Title	Address	Telephone
Planning Division Coastal Studies Grp	Anthony Risko Coastal Planner	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3836
Engineering Division Coastal Engineering Sect.	Arthur T. Shak Coastal Engineer	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3670
Planning Division Ecosystem Planning Sect	Larry Smith Environmental Managers	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-3846
Programs & Project Mgmt Div, Project Mgmt Br	Cecilia Morgan Program Manager	P.O. Box 532711 Los Angeles CA 90053-2325	213/452-4023

Coast of California Storm and Tidal Waves Study Technical Review Team for Ventura/ Santa Barbara Counties

Organization/Function	Name/Title	Experience
Engineering Division Coastal Engineering Sect.	Jane F. Grandon Team Leader	
Engineering Division Coastal Engineering Sect.	Arthur T. Shak Coastal Engineer	

Documents to be Reviewed and Schedule For Review Activities

All of the products of the tasks listed in the detailed scopes of work in Enclosure C – Detailed Scopes of Work, will be subject to Independent Technical Review (ITR). Seamless single discipline review will be accomplished prior to the release of materials to other members of the study team or integrated into the overall study. Section chiefs shall be responsible for accuracy of the computations through design checks and other internal procedures prior to the Independent Technical Review.

Independent product review will occur prior to major decision points in the planning process at the CESPD milestones so that the technical results can be relied upon in setting the course for further study. These products would include documentation for the CESPD mandatory milestone conferences (F3 & F4), HQUSACE issue resolution conferences (AFB & FRC) and the draft and final reports. These products shall be essentially complete before review is undertaken. Since this quality control will have occurred prior to each milestone conference, the conference is free to address critical outstanding issues and set direction for the next step of the study, since a firm technical basis for making decisions will have already been established. In general, the independent technical review will be initiated at least two weeks prior to a CESPD mandatory milestone conference and at least two weeks prior to the submission of documentation for a HQUSACE issue resolution conference.

For products that are developed under contract, the contractor will be responsible for quality control through an Independent Technical Review. Quality assurance of the contractor's quality control will be the responsibility of the Los Angeles District.

Deviations from the Approved Quality Management Plan

The following deviations from the approved quality management plan have been approved by the South Pacific Division:

*******_**List of deviations will be provided by the Los Angeles District*******_

Cost Estimate for Quality Management

The costs for conducting the Independent Technical Review are included in the individual scopes of work that are included in Enclosure C – Detailed Scopes of Work. Quality management activities of Branch and Division Chiefs are included in Supervision and Administration. The total cost for quality management is approximately $145,000, which is approximately 5% of the study cost estimate. Of this amount, $75,000 is included in parent task JLD00 and $70,000 is included in other parent tasks.

PMP Quality Certification

The Chief, Planning Division has certified that 1) the independent technical review process for this PMP has been completed, 2) all issues have been addressed, 3) the streamlining initiatives proposed in this PMP will result in a technically adequate product, and 4) appropriate quality control plan requirements have been adequately incorporated into this PMP. The signed certification is included as Enclosure D.

Study Certification

The documentation of the Independent Technical Review shall be included with the submission of the reports to CESPD. Documentation of the Independent Technical Review shall be accompanied by a certification, indicating that the Independent Technical Review process has been completed and that all technical issues have been resolved. The certification requirement applies to all documentation that will be forwarded to either CESPD or HQUSACE for review or approval. The Chief, Planning Division will certify the pre-conference documentation for the HQUSACE Issue Resolution Conferences and the Draft Coast of California Storm and Tidal Waves Study – Ventura/ Santa Barbara Counties Report. The Final Coast of California Storm and Tidal Waves Study – Ventura/ Santa Barbara Counties Report including the District Commander's signed recommendation will be certified by the District Commander. This certification will follow the example that is included as Appendix H of the CESPD Quality Management Plan and will be signed by the Chief, Planning Division and the District Commander.

Chapter 9. Identification of Procedures and Criteria

Evolution Of The PMP

The Project Management Plan describes all activities from the initial tasks of the study through the preparation of the final study report, the Project Management Plan and PED cost-sharing agreement, and the Los Angeles District's support during the Washington-level review. As the PMP is based primarily on existing information, it will be subject to scope changes as the technical picture unfolds. Because of the limited evaluations during the reconnaissance phase study, the PMP will include significantly more uncertainty and must make appropriate allowances.

Use of the PMP

The current PMP, including the documentation of agreements on changes to the conduct of the study, will be addressed at each of the CESPD milestone conferences and at the formal Issue Resolution Conferences with HQUSACE, including the Alternative Formulation Briefing and Feasibility Review Conference.

The Planning Process

The Water Resource Council's Principles and Guidelines is the basic planning guidance, which establishes a six-step planning process. This process is a conceptual planning sequence for developing solutions to water resource problems and opportunities. The Planning Manual and Planning Primer, both published by the Corps of Engineers' Institute for Water Resources, provide excellent coverage of the planning process. The South Pacific Division also provides training in the six-step process.

Policy

The policies that govern the development of projects are contained in the *Digest of Water Resources Policies and Authorities, EP 1165-2-1*.

Corps of Engineers Regulations

Corps of Engineers regulations are available on the HQUSACE Internet Web Site (www.usace.army.mil). The most important of these regulations is *ER 1105-2-100, Planning Guidance*. Policy compliance review is addressed in *EC 1165-2-203, Technical and Policy Compliance Review*, and, quality control is covered in the *CESPD Quality Management Plan, CESPD R 1110-1-8*. The review of the study products will be accomplished with the review checklist provided in EC 1165-2-203 as *Appendix B, Policy Compliance Review Considerations*.

Processing Requirements

In addition to ER 1105-2-100, the South Pacific Division has provided additional guidance on the processing requirements for each of the milestone submittals. This guidance is contained in *CESPD-ET-P Memorandum, Processing of Planning Reports in the South Pacific Division*, dated June 5, 2000.

Chapter 10. Public Involvement and Coordination

Major Milestones

Two of the milestones in the Corps of Engineers South Pacific Division (CESPD) milestone system have been established specifically for the purpose of providing public forums for public review and to receive public comment and input. The first of these is the initial public workshop. This workshop is an opportunity to present the study to the public and to obtain input and various public opinions. The second milestone in the system is the final public meeting. Scheduled following the release of the draft report for public review, provides the opportunity to present the findings of the study and the draft report to the public for additional comments.

Public Involvement-Coordination Program

Many public laws, executive orders, Federal agency regulations and the Water Resources Council's Principles and Guidelines require that public involvement and coordination be applied to water resources planning activities. The Corps of Engineers (COE) is required to coordinate with State agencies and the Governor or his designated agency, interested and affected agencies at all levels, and public and private groups and individuals. This commitment is to the broadest possible array of publics -- to include any person, group or agency that is not the COE. The importance of public involvement and coordination in COE planning efforts makes it practical to consider that the public includes any individual interested in the study, in effect, anyone not on the study team.

Purposes and Objectives

The purpose of public involvement and coordination is to ensure that Corps of Engineers planning is responsive to the needs and concerns of the public, and to involve all interested parties in the planning decision-making process. Its objectives are 1) to provide information about COE activities and proposed actions to the public; 2) make public desires, needs and concerns available to the decision-makers; 3) provide for adequate interaction with the public before decisions are made, and 4) to adequately account for the views of the public in making decisions. However, these purposes and objectives must be achieved within a framework where the Corps of Engineers cannot relinquish its legislated responsibilities for decision-making.

Public involvement and coordination actions must not only be utilized to inform the public; they must also actively seek public responses in regard to needs, values, ideas for solutions, and, very significantly, reactions to proposed solutions. Public

involvement and coordination must be a two-way communications process, and it must provide people from diverse backgrounds and interests with multiple opportunities to ask questions and offer suggestions.

Effective public involvement and coordination are also effective in reducing the probability of, and reduce unnecessary, conflict, and where possible, achieve consensus. Consensus sometimes occurs spontaneously, and in many instances conflict does not appear to be resolvable. Conflict management techniques should be incorporated into public involvement and coordination activities.

Public Involvement Planning

Public Involvement planning will be incorporated as a major and significant part of the overall planning process – it will develop and be implemented as the CCSTWS study progresses. Public involvement and coordination must be a dynamic process, capable of taking into account changes in the plan formulation process and public attitudes and reactions, and making adjustments to handle these unforeseen occurrences. Every member of the planning team should be prepared to provide input to the public involvement and coordination program, as well as to represent the planning effort in the achievement of public involvement goals.

Representatives of the Non-Federal Sponsor, BEACON, are perhaps the most important players in this element of the planning process. They know the study area and the attitudes and issues surrounding the problems and their solution. They also are familiar with the individuals and organizations that are familiar with the study area and the forces surrounding community attitudes and reactions, which are significant to the planning effort.

Another resource that should not be overlooked for participation in public involvement/coordination planning and implementation is the Los Angeles District's Public Affairs Office. They can provide invaluable insight and assistance in the public information effort, which is the important front-end information-out element of any successful public involvement/coordination plan. The Chief of Public Affairs and staff members possess knowledge of the public communications media, which serves the study area, and influences the attitudes and reactions of the affected individuals and organizations with an interest in the study and its outcome. A successful public information effort can vastly influence the attainment of public involvement/coordination program objectives.

Public Involvement-Coordination Elements

All available means of reaching the many publics affected by and interested in the Coast of California Storm and Tidal Waves Study – Ventura/ Santa Barbara Counties should be developed and utilized if the Study Team is to be successful in accomplishing the study purposes and objectives. The following listing of available resources and methods should be developed and used as appropriate during the progress of the study:

Public Communications Media. Newspapers, radio and television stations, magazines and newsletters and other media distributed by interested and affected study publics should be used whenever possible to distribute information and serve as a

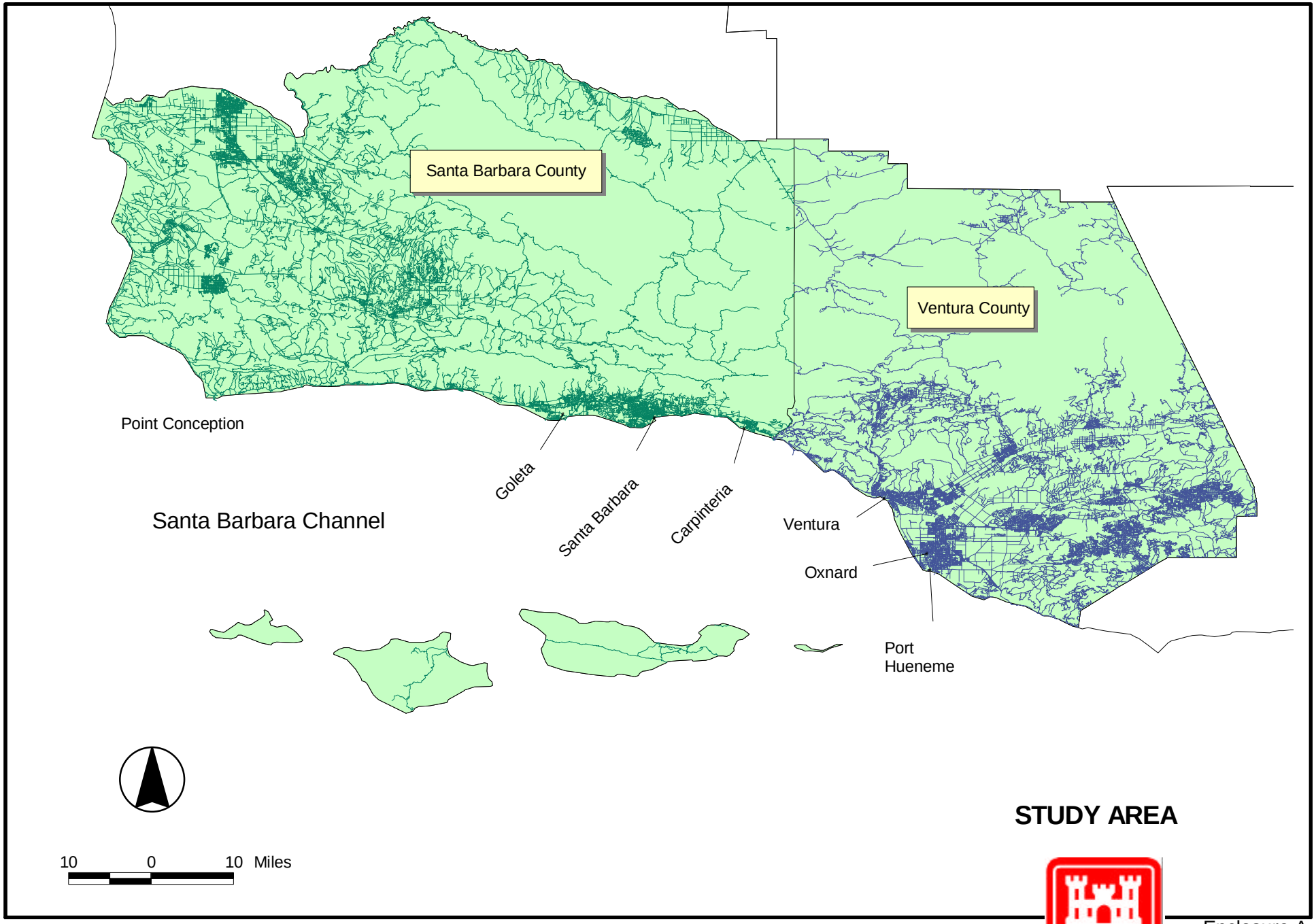
conduit for input and comment. News releases issued whenever appropriate can serve well in informing all affected publics of study activities and progress.

Meetings. There are a variety of meetings that must be effectively utilized in the successful achievement of public involvement/coordination objectives. The most important and visible meetings are the formal public meetings, which are scheduled by directive at the initiation of the study, and near the end of the study as part of the public review of the draft study report and the study findings. Public comment and input are vital to finalizing the study report and completing the study. These meetings include public meetings, open meetings with interest groups, workshops, and any opportunities to distribute information of the study and progress to generate public input.

Publications. Reports, brochures, newsletters and information bulletins can be prepared and distributed at appropriate points throughout the study process. These publications could be distributed after the definition of problems and opportunities, when preliminary alternatives have been formulated, or when the effects or impacts of alternatives have been identified.

Mailing Lists. Mailing lists are listed last on this preliminary itemization of public involvement-coordination elements to emphasize their importance to the program. They should be among the first public involvement actions, because they are key to the successful accomplishment of program objectives, and will be utilized throughout the conduct of the study.

Enclosure A. Project Area Map



STUDY AREA

Enclosure A

Enclosure B. CESPD Milestone System

CCSTWS Study Phase

Milestone Number[1] And Name	Milestone Description
100 Initiate Study	CESPD Milestone F1[2] – The date the District receives Federal CCSTWS study funds.
101 CCSTWS Study Public Workshop (F2)	CESPD Milestone F2[2] – This is a Public Meeting/Workshop to inform the public and to obtain input and public opinion.
102 CCSTWS Study Scoping Meeting (F3)	CESPD Milestone F3[2] – The CCSTWS Study Scoping Meeting with HQUSACE is to address potential changes in the PMP. It will establish without-project conditions and screen preliminary plans.
103 Sand Management Plan Review Conference (F4)	CESPD Milestone F4[2] – The Sand Management Plan Review Conference will evaluate the final plans, reach a consensus that the evaluations are adequate to select a plan and prepare AFB issues.
124 Sand Management Plan Formulation Briefing	CESPD Milestone F4A[2] – The Sand Management Plan Formulation Briefing (AFB) is for policy compliance of the proposed plan with HQUSACE to identify actions required to prepare and release the draft report.
145 Public Review of Draft Report	CESPD Milestone F5[2] – Initiation of field level coordination of the draft report with concurrent submittal to HQUSACE through SPD for policy compliance review.
162 Final Public Meeting	CESPD Milestone F6[2] – Date of the final public meeting.
130 CCSTWS Study Review Conference	CESPD Milestone F7[2] – Policy compliance review of the draft report with HQUSACE to identify actions that are required to complete the final report.
165 CCSTWS Study Report	CESPD Milestone F8[2] – Date of submittal of final report package to DESPD-ET-P, including technical and legal certifications, compliance memorandum and other required documentation.
170 MSC Commander's Public Notice	CESPD Milestone F9[2] – Date of issue of the Division Commanders Public Notice. Congressional notification would occur two days prior. The report and supporting documentation would be forwarded to HQUSACE. This milestone is used as the completion of the CCSTWS study report in the CMR.
330 Chief's Report to ASA (CW)	Date of the signed report of the Chief of Engineers.
320 ROD Signed of FONSI Signed	Date that ROD is signed by the ASA(CW) when forwarded for authorization.
350 President Signs Authorization	Date President signs authorizing legislation.

[?] MIL – Milestone number used in the PROMIS database.

[2] F1 through F9 are the historical designations for the SPD Milestones.

Enclosure C: Detailed Scopes of Work

Table of Contents

WBS#	Description
J0000	Feasibility Report (Feas)
J0000	Milestones

General Description of Parent Task: This is a listing of the milestones designed to provide a schedule of expected deliverables throughout the entirety of the feasibility phase of this Coast of California Storm and Tidal Waves Study (CCSTWS). The milestones are scoped to allow adequate time to properly review all project tasks and initiatives with respect to the overall health and stability of the project shoreline. The detailed listing of milestones and milestone schedule of completions is presented in Chapter 2.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$2,780,000

Task:	Initiate Study

Description of Task: This is the date that the district receives Federal feasibility phase study funds; thereby, allowing the initiation of this CCSTWS feasibility study.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 0 days

Task:	CCSTWS Public Workshop (F2)

Description of Task: This milestone has been implemented to conduct a Public Meeting/Workshop to inform the public of the impending feasibility study and the associated sediment management plan. In addition, this forum allows planning managers to obtain public opinion input.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 30 days

Task:	CCSTWS Scoping Meeting (F3)

Description of Task: This is the first CCSTWS Feasibility Study Scoping Meeting with Headquarter, U.S. Army Corps of Engineers (HQUSACE) to address potential changes in the Project Management Plan. In addition, this meeting establishes the existing baseline conditions and the preliminary discussions on screening preliminary plans.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 120 days

Task:	Sand Management Plan Review Conference (F4)

Description of Task: This conference is the second South Pacific Division mandatory milestone conference. The purpose of the conference is to screen the final sand management plans in order to reach a cumulative opinion that the evaluations are adequate to select a plan and identify potential issues for the Sand Management Plan Formulation Briefing (AFB).

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 960 days

Task:	Sand Management Plan Formulation Briefing – AFB

Description of Task: The Sand Management Plan Formulation Briefing (AFB) will be scheduled. The goal of the AFB process is to obtain Headquarters approval to prepare the draft report and release it for public review concurrent with forwarding the draft to Headquarters. The AFB will be held in accordance with the instructions in Appendix O of ER 1105-2-100. The AFB includes participation by Headquarters and will be chaired by the South Pacific Division's Chief, Planning Division, or the Division's planning program manager on behalf of the Chief, Planning Division. The planning program manager will facilitate informal coordination with Headquarters and the district to finalize the final memorandum for the AFB and will be signed at Headquarters approximately 10 days after the conference. Upon receipt of the signed memorandum from Headquarters, the planning program manager will endorse the memorandum to the district.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 180 days

Task:	Draft CCSTWS Report

Description of Task: This is the initiation of field level coordination of the draft CCSTWS report with a concurrent submittal to the HQUSACE through the South Pacific Division (SPD) for policy compliance and review.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 180 days

Task:	Final Public Meeting

Description of Task: This is the date of the final public meeting to review changes to the original streamlining initiatives and alterations to the project management plan. This task is not required to be included in milestone submissions.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 30 days

Task:	CCSTWS Review Conference

Description of Task: The purpose of the CCSTWS Review Conference (FRC) is to resolve outstanding policy issues that were raised in the Headquarters review of the draft CCSTWS report and to identify actions that are required to complete the final report. The FRC includes participation by Headquarters and will be chaired by the South Pacific Division Chief, Planning Division, or the planning program manager on behalf of the Chief, Planning Division.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 30 days

Task:	CCSTWS Final Report

Description of Task: This is the date of submittal of the final report package to the South Pacific Division (CESPD-ET-P). The final report package will include all technical and legal certifications, compliance memorandums, and other required documentations.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 120 days

Task:	MSC Commander's Public Notice

Description of Task: This is the date of issue of the Division Commander's Public Notice preceded by Congressional notification, which would occur two days prior. Report and supporting documentation will be forwarded to HQUSACE where it will be utilized as the completed form of the CCSTWS report in the Command Management Review (CMR).

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 30 days

Task:	Chief's Report to ASA (CW)

Description of Task: Coordination of the signed Chief's report to the Assistant Secretary of Army Civil Works, based on the initial draft and the final CCSTWS report submitted by the district, will be through the South Pacific Division's planning program manager. When the final Chief's report is received, the planning program manager will provide copies to the district, and the assigned planning program manager will inform other members of the electronic copies of the Chief's report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 60 days

Task:	ROD Signed or FONSI Signed

Description of Task: This is the date the Record of Division (ROD) is signed by the Assistant Secretary of the Army for Civil Work (ASA(CW)) and forwarded for authorization.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 10 days

Task:	President Signs Authorization

Description of Task: This is the date the President signs the CCSTWS feasibility report authorizing legislation.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 60 days

WBS#	**Description**
J0000	Feasibility Report (Feas)
JA000	Engineering Appendix

General Description of Parent Task: This parent task includes all engineering related division disciplines work required to achieve the successful completion of the feasibility type CCSTWS study report. The effort included under this task involves surveys and mapping except real estate, coastal studies/report, geotechnical studies/report, and the engineering design and analysis report.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$1,895,000

WBS#	**Description**
J0000	Feasibility Report (Feas)
JA000	Engineering Appendix
JAA00	Feas – Surveys and Mapping except Real Estate

General Description of Parent Task: This parent task will be performed to determine, map, and catalog the detailed beach morphology of the Santa Barbara/ Ventura County shoreline. The Surveys and Mapping parent task work will be accomplished through beach profile surveys, ortho-rectified aerial photography, data reductions of historical survey information, and the Geographic Information System (GIS) integration of both historical and updated beach profile data. The resulting output will be used to evaluate the shoreline and volumetric changes, littoral transport, and sediment budget. At the conclusion of this task all data acquisitions will be integrated into GIS, allowing for the easy assimilation of readily available data in all future investigations involving the Santa Barbara/ Ventura County shoreline. In addition, this information will aid in the federal and state initiative to develop a comprehensive sediment management plan for the state. A report will be prepared presenting the morphological mapping of the region and the data obtained over the course of the surveys and mapping investigation. The results of this task will form the basis for the scope of the Alternative Formulation Briefing (AFB) documentation.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$650,000

Task:	Surveys and Mapping – Lidar (SHOALS) Survey

Description of Task: This task effort will consist of one Lidar (SHOALS) survey. This particular type of survey will be performed to establish the coastal baseline conditions along the entire project area and to definitively delineate the location of the existing bluff ledge between Point Conception and Ellwood. In addition, the density of the data obtained will allow for the generation of a highly detailed topographic map of the study area, which can then be utilized to develop the GIS coastal database. The development of this database will enable seamless data retrieval for future coastal investigations throughout the project study area. Moreover, the flight will be scheduled during a lower low tidal condition and at a time that is consistent with maximizing the overall water clarity. Ortho-rectified aerial photography of the entire Santa Barbara/ Ventura County shoreline will be conducted during the Lidar flight as well. These photographs will provide a good visual reference for the evaluations of the beach profile survey data and

will initiate the development of a baseline catalog to measure and compare future aerial photographic surveys.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$300,000

Duration: 180 days

Task:	Surveys and Mapping – Beach Profile Surveys

Description of Task: This task will require the design and implementation of a detailed beach profile survey program similar to the beach profile investigations currently being performed by BEACON. A total of four (4) surveys will be conducted over two (2) years and will be scheduled to incorporate two (2) summer and two (2) winter profile seasons. At this point in time, the 25 established BEACON transects, as well as additional supplemental pertinent transects, will be surveyed in this project task to facilitate positive correlative comparisons with the historic profiles. In addition, the two major flood deltas within the project area, namely Ventura and Santa Clara River Deltas, will be surveyed in combination with the profile transect surveys to establish the relative size and seasonal movement of the deltas. The data obtained will be reduced and analyzed for further coastal process investigations.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$100,000

Duration: 720 days

Task:	Surveys and Mapping – GIS Integrations

Description of Task: The database created during the Surveys and Mapping project task will be integrated into GIS to allow for the importation of the information into various computer software packages enabling shoreline and volumetric calculations, mapping and plotting. The resulting Santa Barbara/ Ventura County shoreline GIS database will be extremely useful in that it will combine all relevant information, in addition to the survey data, within the program. This will allow for the easy retrieval of pertinent information. In addition, updating the GIS database upon completion of future investigations will require a minimal effort and will facilitate expedited data analysis.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$150,000

Duration: 1080 days

Task:	Surveys and Mapping –AFB Documentation

Description of Task: The results of the Surveys and Mapping parent task will be discussed formally with the federal and local sponsor to evaluate the findings of the task and to provide a working dialog to streamline the results presented in the draft report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$25,000

Duration: 30 days

Task:	Surveys and Mapping – Draft Report

Description of Task: A draft report outlining the data collections and the results of the surveys and mapping field investigations will be submitted for further review.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$50,000

Duration: 180 days

Task:	Surveys and Mapping – Final Report

Description of Task: Upon the completion of the review of the draft report, the final revision will be made to the document allowing for the preparation of the final report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$25,000

Duration: 60 days

WBS#	Description
J0000	Feasibility Report (Feas)
JA000	Engineering Appendix
JAB00	Feas – Coastal Studies/Report

General Description of Parent Task: This parent task will be performed in order to obtain an understanding of the regional coastal processes; thereby, enabling the formulation of the sediment budget within the Ventura/ Santa Barbara County nearshore coastal zone. This task will include a data collections and review encompassing all available pertinent data research and reported findings within the project area, as well as, investigations of the sediment sources, sediment sinks, sediment entrapments, nearshore wave climatology, storm-related coastal flooding, and shoreline and volumetric changes. The calculations for these investigations will be utilized to determine and evaluate the sediment budget for the region. The results of this task will provide the basis for the scope of the Alternative Formulation Briefing (AFB) documentation. A final report will be prepared presenting the results of the coastal studies analysis including concerns voiced during the AFB documentation phase.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$915,000

Task:	Coastal – Data Collection and Review

Description of Task: This task will include the collection and analysis of all previous data research and reported findings pertaining to the study area. The existing data will be reviewed and will eventually determine the scope of field investigations necessary to successfully perform the remaining tasks of the Coastal Studies/Report parent task.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 90 days

Task:	Coastal – Sediment Source Investigations

Description of Task: This task will entail investigating sources of sediment that deliver material to the coastal zone of Santa Barbara and Ventura Counties. These mechanisms include fluvial sediment discharge, sediment yield from bluff erosion, beach nourishment, and onshore migration. The major rivers, creeks, and streams transporting sediment to the open coast will be investigated to supplement current ongoing studies. These ongoing studies include the Santa Clara River investigations performed by Dr. Howard Chang and the Matilija Dam Ecosystem Restoration Project performed by the U.S. Army Corps of Engineers. Values for the bluff erosion rate and the associated delivery of sediment to the nearshore coastal region will be assessed for the region between Point Conception and Ellwood. In addition, sediment distributed along the shoreline through beach restoration and opportunistic sand placement projects will be computed. Although onshore sediment migration is a difficult quantity to quantify, evaluating all of the beach profile surveys and available bathymetric data may allow for the approximation of this value. The results of this task will be utilized in the detailed sediment budget analysis.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$100,000

Duration: 180 days

Task:	Coastal – Supplemental Institutional Cobblestone Dynamics Investigation

Description of Task: This task will provide an additional funding channel to support either an academic institution or a SeaGrant fellowship study to investigate the dynamics and movements of cobblestone in the nearshore environment. It has been hypothesized that the removal of the Matilija Dam could result in an increase in the amount of gravel, boulder, and cobble discharged to the nearshore environment seaward of the mouth of the Ventura River. Therefore, determining the likely interaction between the increased percentage of cobblestone and the existing nearshore environment becomes important when determining future sediment budget characteristics. This particular study is an opportunistic investigation and is strictly dependent upon the availability of adequate funding streams.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$150,000

Duration: 360 days

Task:	Coastal – Sediment Sink Investigations

Description of Task: This task work will entail determining the loss of littoral transport from the system as a result of sediment sinks. Within the Santa Barbara/ Ventura County project area there is one submarine canyon, namely the Hueneme Submarine Canyon, which is responsible for sediment losses. In addition, storm-related seaward cross-shore transport processes, overwash deposits, and inland aeolian deposits may result in a loss of sediment to the system as well. Sediment sink investigations involving potential previous side scan sonar bathymetric data of the submarine canyons, storm damage assessments, and beach profile surveys will be analyzed to quantify the annual sediment reduction within the system. Upon the completion of this task, the quantities for the loss of volume resulting from sediment sinks will be evaluated and integrated into the sediment budget analysis.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$50,000

Duration: 180 days

Task:	Coastal – Sediment Entrapment Investigations

Description of Task: This task work will entail analyzing the accumulation of sediment adjacent to both natural and artificial structures that effectively impedes the progression of the alongshore sediment transport. In the Santa Barbara/ Ventura County project area there are several structures that effectively trap a proportion of the alongshore sediment transport; thereby, resulting in eroded downdrift beaches. These include the natural headland retention structures of Point Conception, Government Point and Point Mugu, as well as artificial retention structures such as Santa Barbara Harbor, Ventura Harbor, Channel Islands Harbor and Port Hueneme. Where possible, existing and ongoing investigations will be reviewed to acquire pertinent information related to this effort (for example the Ventura Bypass Studies). This task will determine the volumes and percentages of the accreted littoral transport from the amount bypassed around or through a given structure. The resulting littoral transport rates will be added to the formulation of the sediment budget.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$50,000

Duration: 180 days

Task:	Coastal – Nearshore Wave Climatology Investigations

Description of Task: This task work will entail investigating the nearshore wave climate throughout the Santa Barbara/ Ventura County shoreline. Wave climate information will provide a basic understanding of the seasonal oceanographic and nearshore wave environment driving sediment transport. Wave data will be obtained from the CDIP operating buoys located at Point Conception, Goleta Point and Anacapa Passage. To properly calibrate the data retrieved from these buoys, an additional Datawell Directional Waverider buoy will be deployed over a one (1) year period in 20-meter water of depth at four (4) separate locations. (3 months at each location). Utilizing the resulting data, numerical wave transformation models will be instituted to aid in the calculations of nearshore wave characteristics. The wave induced currents, driving the alongshore and cross-shore sediment transport, will eventually aid in the development of a shoreline response model. As a final deliverable to the local sponsor, the real-time data generated by the wave buoys will be available to the public by establishing a website such as the current CDIP website, which is supported by UCSD.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$150,000

Duration: 360 days

Task:	Coastal – Storm-Related Coastal Flooding Analysis

Description of Task: This task work will be beneficial in determining the amount of wave runup associated with storm events of varying return periods. The numerical model SBEACH may be employed to determine the storm related eroded profiles for the established transects south of Ellwood. Once the eroded profile is determined for a specific storm magnitude, wave runup calculations will be performed. The probability of varying degrees of wave runup will then be combined with the 50-year tidal probability to determine the frequency with which overtopping of a specific beach profile transect may be expected to occur. The information obtained from this task will be imported into the shoreline response model and will eventually aid in establishing a regional sediment management plan.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$50,000

Duration: 180 days

Task:	Coastal – Shoreline and Volumetric Changes Evaluations

Description of Task: The evaluations for the shoreline and volumetric changes throughout the Santa Barbara and Ventura County project area will form the basis of the regional sediment management plan (RSMP). This task will effectively identify areas or reaches of concern and will determine the volume of sediment deficit exhibited by each reach. In addition to erosion prone areas, zones of accretion will also be identified. This information will ultimately form the basis for the determination of the Santa Barbara/ Ventura County sediment budget.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$100,000

Duration: 240 days

Task:	Coastal – Sediment Budget Analysis

Description of Task: All data acquisitions and calculations will be assimilated and analyzed within this task to determine the entire sediment budget for the Santa Barbara and Ventura County project area, with an emphasis on the area south of Ellwood. The entire study shoreline will be separated into distinct reaches and will be identified based on barriers to littoral transport, where the flow of sediment is impeded, resulting in a known sediment transport rate. For each reach inflow and outflow of sediment in the alongshore and cross-shore direction will be determined. The beach profile surveys will then be analyzed and imported into the GENESIS numerical model to determine the future shoreline evolution and the associated volumetric deficiencies or accumulations along the coastal zone. Based on the sediment budget analysis and the future shoreline predictions, erosion prone sub reaches will be clearly identified and the values of the sediment transport rate deficiencies will aid in the formulation of the regional sediment management plan.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$100,000

Duration: 180 days

Task:	Coastal – AFB Documentation

Description of Task: The results of the Coastal Studies/Report parent task will be discussed formally with the federal and local sponsor to evaluate the findings of the task and to provide a working dialog to streamline the results presented in the draft report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$25,000

Duration: 30 days

Task:	Coastal – Draft Report

Description of Task: The data and resultant analysis obtained in conjunction with AFB coordination will be presented in a draft report outlining the findings of each coastal studies task. The report will then be submitted for further review.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$100,000

Duration: 120 days

Task:	Coastal – Final Report

Description of Task: Upon the completion of the review of the draft report, final adjustments will be made to the document allowing for the preparation of the final report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$25,000

Duration: 30 days

WBS#	Description
J0000	Feasibility Report (Feas)
JA000	Engineering Appendix
JAC00	Feas – Geotechnical Studies/Report

General Description of Parent Task: The work conducted in this parent task will include the review of all existing available geotechnical data. Since the primary deliverable resulting from this study is a regional sediment management plan for the Santa Barbara/ Ventura County project area, limited geotechnical studies are required. The minimal effort that will be performed includes the examination of potential opportunistic sand replenishment borrow sites and the riverine and receiver site sediment characteristics investigations. In addition, limited seacliff investigations will be performed as well. These geotechnical findings will provide the basis for the scope of the Alternative Formulation Briefing (AFB) documentation. A final report will be prepared presenting the results of the geotechnical studies analysis including concerns voiced during the AFB documentation phase.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$225,000

Task:	Geotech – Data Collection and Review

Description of Task: This task effort will consist of the review of previous pertinent geotechnical information within the study area. This information is to include all efforts regarding the sediment characteristics of potential borrow sites, receiver sites, riverine sediment and subsurface characteristics. In addition, supplemental data collection efforts may be performed to better categorize the nearshore sediment distribution within the study area and to better understand the physical characteristics of the bluff sediments as well.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 90 days

Task:	Geotech – Geotechnical Seacliff Studies

Description of Task: Seacliff morphological investigations will be performed to quantify the retreat rate of the seacliffs and the associated influx of sediment into the coastal littoral system. This will be accomplished through the review of previous data collection and will be supplemented by limited field investigations to map the existing seacliff positions and erosional zones. Once documented this information can be utilized for future investigations enabling updated assessments of the seacliff retreat rates.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$150,000

Duration: 360 days

Task:	Geotech – AFB Documentation

Description of Task: The results of the Geotechnical Studies/Report parent task will be discussed formally with both the federal and local interests to evaluate the findings of the task and to provide a working dialog to streamline the results presented in the draft report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 30 days

Task:	Geotech – Draft Report

Description of Task: The data and resultant analysis obtained in conjunction with AFB coordination will be presented in a draft report outlining the findings of each geotechnical studies task. The report will then be submitted for further review.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$30,000

Duration: 90 days

Task:	Geotech – Final Report

Description of Task: Upon the completion of the review of the draft report, final adjustments will be made to the document allowing for the preparation of the final report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 30 days

WBS#	**Description**
J0000	Feasibility Report (Feas)
JA000	Engineering Appendix
JAE00	Feas – Engineering and Design Analysis Report

General Description of Parent Task: This parent task work includes the design and engineering evaluations of the plan alternative formulation for the regional coastal sediment management plan. This will consist of the review of existing baseline conditions including coastal hydrodynamics, seacliff morphology, littoral processes, storm-related coastal flooding, shoreline and volumetric changes, and the sediment budget analysis outlined during the coastal studies parent task. The work will include field investigations and coordination with the local sponsor regarding design, management, and monitoring considerations and will be attended to in the AFB documentation. A final report will be prepared presenting the results of the engineering and design analysis phase including concerns voiced during the AFB documentation.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$105,000

Task:	Engr & Design – Development of a Regional Coastal Sediment Management Plan

Description of Task: Upon the review of the findings of the Coastal Studies parent task, a regional coastal sediment management plan will be developed for the entire Santa Barbara/ Ventura County study area shoreline. Alternative management plan formulations will be subjected to a detailed coastal engineering evaluation to assess the potential expected benefits. The regional coastal sediment management plan will be thoroughly documented in the CCSTWS study report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$50,000

Duration: 360 days

Task:	Engr & Design – AFB Documentation

Description of Task: The results of the Engineering and Design Analysis Report parent task will be discussed formally with federal and local interests to evaluate the findings of the task and to provide a working dialog to streamline the results presented in the draft report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$10,000

Duration: 30 days

Task:	Engr & Design – Draft Report

Description of Task: The data and resultant analysis obtained in conjunction with AFB coordination will be presented in a draft report outlining the findings of each engineering and design task. The report will then be submitted for further review.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$30,000

Duration: 90 days

Task:	Engr & Design – Final Report

Description of Task: Upon the completion of the review of the draft report, final adjustments will be made to the document allowing for the preparation of the final report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 30 days

WBS#	Description
J0000	Feasibility Report (Feas)
JI000	Feas – Public Involvement Documents

General Description of Parent Task: The Public Involvement Documents task will include developing a mailing list of all public and private interests, including federal and state clearinghouses, who will be kept informed of study progress and results. A public workshop; in addition to, a final public meeting on the draft report will be conducted. Work required for public involvement activities will include arranging and hosting the public workshop and outreach sessions and preparing follow-up documentation.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$90,000

Task:	Initial Public Meeting

Description of Task: This is the first public meeting designed to inform the public of the CCSTWS study specifics. Any initial public concerns regarding the study will be documented and addressed in a timely fashion.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$20,000

Duration: 30 days

Task:	Public Workshops in Support of Plan Selection

Description of Task: The purpose of the public workshop is to solicit input concerning study scope, local interests and desires, and the streamlining of concerns to be addressed in the CCSTWS report. Additionally, it is expected that a separate meeting will be held with interested Federal, State, and local agencies, including an open workshop for other interested parties.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$30,000

Duration: 60 days

Task:	Public Involvement Support to AFB

Description of Task: Decisions and clarifications discussed during the Alternative Formulations Briefing will be made public allowing for concerned party input and to ensure public involvement support.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$10,000

Duration: 30 days

Task:	Final Public Meeting

Description of Task: The final public meeting will provide the public and organizations an opportunity to comment on the study findings included in the draft report. The District will present results of the study, conclusions, and recommendations to the public at a formal public meeting. The meeting will include opportunities for all attendees to present questions, concerns, and opinions regarding the study results, and allow attendees the ability to share information with the District and local sponsor representatives regarding potential concerns associated with the proposed recommendations. A transcript of the meeting will be prepared and a summary will be developed to be included as part of the study document.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 30 days

Task:	Public Involvement Support to FRC

Description of Task: Decisions and clarifications discussed during the Feasibility Review Conference will be made public allowing for concerned party input and to ensure public involvement support.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 30 days

WBS#	**Description**
J0000	Feasibility Report (Feas)
JJ000	Feas – Plan Formulation and Evaluation

General Description of Parent Task: The Plan Formulation and Evaluation parent task includes refining information on the conditions of the present and future resources, further defining related problems and needs, establishing planning objectives, and developing, reviewing, and refining a regional sand management plan. The sand management plan will be formulated from a variety of improvement and stabilization measures and will display a full array of opportunities.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$70,000

Task:	Plan Formulation and Evaluation of Regional Coastal Sediment Management Plan (RCSMP)

Description of Task: The plan formulation and evaluation of the regional sediment management plan will be conducted to determine the suitability of the plan alternatives from an engineering, environmental, economic, and public best interest standpoint. These evaluations will be analyzed and streamlined to determine a recommended plan alternative.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$25,000

Duration: 360 days

Task:	Plan Formulation and Evaluation – AFB Documentation

Description of Task: The results of the Plan Formulation and Evaluation parent task will be discussed formally with the District and BEACON to evaluate the findings and to determine the feasibility of each alternative for the proposed regional sand management plan.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$10,000

Duration: 30 days

Task:	Plan Formulation and Evaluation – Draft Report

Description of Task: This task will entail the first submission of the Plan Formulation and Evaluation Report. The draft report will be circulated to allow the State and Federal agencies and interested organizations and individuals the ability to provide additional comments.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$20,000

Duration: 90 days

Task:	Plan Formulation and Evaluation – Final Report

Description of Task: Comments received on the draft Plan Formulation and Evaluation Report will be addressed, and revisions will be made in accordance with federal and state law, allowing for the preparation of the final report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$10,000

Duration: 30 days

Task:	Plan Formulation and Evaluation – Support to Division Commander's Notice

Description of Task: Comments received on the draft Plan Formulation and Evaluation Report, and revisions made in response will be described and incorporated as appropriate into the Division Commander's Notice.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$5,000

Duration: 10 days

WBS#	**Description**
J0000	Feasibility Report (Feas)
JL000	Feas – Final Report Documentation

General Description of Parent Task: The Final Report Documentation parent task will include all work necessary to produce and distribute the final feasibility type CCSTWS study report and supporting documents. This includes addressing all required actions as contained in the Feasibility Review Conference (FRC) Project Guidance Memorandum (PGM), and comments received from public review of the draft report. Tasks also include all work items necessary to support the review process of the final report by the South Pacific Division, Headquarters, and USACE through forwarding of the final report by the Assistant Secretary of the Army for Civil Works (ASA-CW) to the Office of Management and the Budget (OMB) and eventually to Congress. These tasks include providing copies of the report for State and Agency Review, answering comments, attending review meetings, and revising the report as necessary.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$75,000

Task:	Reproduction and Distribution of F3 Documentation

Description of Task: This task will entail the reproduction and distribution of the F3 milestone report. The F3 documentation will provide a description of the existing and historic coastal process conditions within the study area and will qualify any potential problems and needs.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 60 days

Task:	Reproduction and Distribution of F4 Documentation

Description of Task: This task will entail the reproduction and distribution of the F4 milestone report. The F4 documentation will present the full alternative regional sediment management plan formulations and the tentatively selected recommended plan. The F4 report will provide the basis for the Alternative Formulation Briefing (AFB).

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 60 days

Task:	Reproduction and Distribution of AFB Documentation

Description of Task: This task will entail the reproduction and distribution of the AFB milestone report. The AFB Project Guidance Memorandum (PGM) will determine the actions needed to allow the completion of the draft report for public review.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$5,000

Duration: 30 days

Task:	Reproduction and Distribution of Draft Report

Description of Task: This task will entail the reproduction and distribution of the Draft Report. The draft report documentation will address the required actions identified in the AFB PGM in finalizing the draft report. The draft report will be reproduced and sent to the South Pacific Division, HQUSACE, and the Office of the Assistant Secretary of the Army for Civil Works representing the basis for a Feasibility Review Conference (FRC) to address any final issues or questions regarding the completion of the study recommendations for the final report. A FRC PGM will be completed by HQUSACE to identify the required actions needed to complete the final CCSTWS study report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 60 days

Task:	Reproduction and Distribution of Final Report

Description of Task: This task will entail the reproduction and distribution of the Final Report. This includes addressing all required actions as contained in the FRC PGM, and comments received from public review of the draft report. Tasks also include all work items necessary to support the review process of the final report by the South Pacific Division, Headquarters, and USACE through forwarding of the final report by the Assistant Secretary of the Army for Civil Works (ASA-CW) to the Office of Management and the Budget (OMB) and eventually to Congress. These tasks include providing copies of the report for State and Agency Review, responding to comments, attending review meetings, and revising the report as necessary.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$25,000

Duration: 30 days

WBS#	Description
J0000	Feasibility Report (Feas)
JL000	Feas – Final Report Documentation
JLD00	Feas – Technical Review Documents

General Description of Parent Task: This task involves the review documents prepared by the members of the Technical Review Team as required by various study milestones.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$75,000

Task:	Independent Technical Review – F3 Documentation

Description of Task: This task work documents the findings of the Review Team prepared after review of the F3 report for the CCSTWS Study Scoping Meeting.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 60 days

Task:	Independent Technical Review – F4 Documentation

Description of Task: This task work documents the findings of the Review Team prepared after review of the F4 report for the Sediment Management Plan Review Conference.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 60 days

Task:	Independent Technical Review – AFB Documentation

Description of Task: This task work documents the findings of the Review Team prepared after review of Plan Formulation Reports for the Alternative Formulation Briefing.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$5,000

Duration: 30 days

Task:	Independent Technical Review – Draft Report

Description of Task: This task work documents the findings of the Review Team prepared as a result of the formal review of the Draft CCSTWS Study Report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$30,000

Duration: 60 days

Task:	Independent Technical Review – Final Report

Description of Task: This task work documents the findings of the Review Team prepared after formal review of the Final CCSTWS Study Report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$10,000

Duration: 30 days

WBS#	Description
J0000	Feasibility Report (Feas)
JM000	Feas – Washington Level Report Approval (Review Support)

General Description of Parent Task: The Washington Level Report Approval task involves the preparation and distribution of the draft CCSTWS study report and support to the Washington Level Review effort.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$50,000

WBS#	Description
J0000	Feasibility Report (Feas)
JP000	Feas – Management Documents

General Description of Parent Task: This task work includes the preparation of the report documenting the process and findings of the feasibility type CCSTWS study.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$525,000

WBS#	Description
J0000	Feasibility Report (Feas)
JP000	Management Documents
JPA00	Project Management and Budget Documents

General Description of Parent Task: The Project Management and Budget Documents parent task is required by the Program Development Office for preparation of budget requirements and monitoring funds. The project manager is responsible for managing the overall study cost and schedule through the use of the PRB system; preparation of present and future budget year submissions; coordination with the non-Federal sponsor; and the preparation of the Project Management Plan presenting the Federal and non-Federal requirements, costs, and schedule required for implementation of the recommended plan. The Corps project manager with assistance by the non-Federal sponsor project manager will monitor expenditures, keep the PMP current, prepare project management reports, the Schedule And Cost Charge Request (SACCR) as needed, and report study status and issues to the District Engineer.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$70,000

Task:	Programs and Project Management to Support F3 Milestone

Description of Task: This work includes the tasks involved in Program and Project Management Division (PPMD) support to the CCSTWS Study Scoping Meeting.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 90 days

Task:	Programs and Project Management to Support F4 Milestone

Description of Task: This work includes the tasks involved in PPMD support to the Alternative Review Conference.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$15,000

Duration: 840 days

Task:	Programs and Project Management – AFB Documentation

Description of Task: This work includes the tasks involved in PPMD support to the Alternative Formulation Briefing.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$5,000

Duration: 60 days

Task:	Programs and Project Management – Draft Report

Description of Task: This work includes the tasks involved in PPMD support to the preparation and review of the draft CCSTWS study report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$20,000

Duration: 180 days

Task:	Programs and Project Management – Final Report

Description of Task: This work includes the tasks involved in PPMD support to the preparation and distribution of the final CCSTWS study report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$10,000

Duration: 120 days

Task:	Programs and Project Management – DE's Notice

Description of Task: This work includes the tasks involved in PPMD support of the review, preparation, and distribution of the District Engineer's (DE's) Notice.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$5,000

Duration: 30 days

WBS#	Description
J0000	Feasibility Report (Feas)
JP000	Feas – Management Documents
JPB00	Supervision and Administration

General Description of Parent Task: The activities involved in the District-wide supervision and administration of tasks involving the conduct of the study and report preparation.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$230,000

Task:	S&A – Planning Division

Description of Task: The activities involved in the supervision and administration of Planning Division tasks involving personnel in the conduct of the study and report preparation.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$100,000

Duration: 1,440 days

Task:	S&A – Engineering Division

Description of Task: The activities involved in the supervision and administration Engineering Division tasks involving personnel in the conduct of the planning review and report preparation.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$75,000

Duration: 1,440 days

Task:	S&A – PPMD

Description of Task: The activities involved in the supervision and administration PPMD tasks involving personnel in the conduct of the planning review and report preparation.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$30,000

Duration: 1,440 days

Task:	S&A – Contracting Division

Description of Task: The activities involved in the supervision and administration Contracting Division tasks involving personnel in the conduct of the planning review and report preparation.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$25,000

Duration: 1,440 days

WBS#	**Description**
J0000	Feasibility Report (Feas)
JP000	Feas – Management Documents
JPC00	Contingencies

General Description of Parent Task: This task work includes the setting aside of funding and resources for completion of study activities.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$225,000

WBS#	Description
L0000	Project Management Plan

General Description of Parent Task: The PMP is an attachment to the Feasibility CCSTWS Cost Sharing Agreement defining the planning process, detailed activities to be accomplished, sets the schedule, and details the costs to the Corps of Engineers to BEACON.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Task:	PMP – Draft PMP

Description of Task: A product associated with the feasibility-type CCSTWS study is the Project Management Plan (PMP). The PMP describes the project activities during Pre-Construction Engineering and Design; in addition to, construction phases, and is a basis for the project cost sharing agreement. A draft PMP will be attached to the draft feasibility special study report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 60 days

Task:	PMP – Final PMP

Description of Task: This task work includes the completion of a signed and executed final PMP to accompany the Final Feasibility-type CCSTWS Study Report.

Cost Summary

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Duration: 30 days

WBS#	Description
Q0000	PED Cost Sharing Agreement

General Description of Parent Task: This task work includes the Cost Sharing Agreement for the implementation and operation of the proposed project between the Federal Government and BEACON.

Previous Approved	

Labor		Other Corps		Total Federal	
Non-Labor		Other Agency		Non-Fed In-Kind	
Total District		Contract		Total	$0

Summary of Costs

WBS#	Description	Federal Cost	Non-Fed In-Kind	Total Cost
JAA00	Feas - Surveys and Mapping except Real Estate			$650,000
JAB00	Feas - Coastal Studies/Report			$915,000
JAC00	Feas - Geotechnical Studies/Report			$225,000
JAE00	Feas - Engineering and Design Analysis/Report			$105,000
JI000	Feas - Public Involvement Documents			$90,000
JJ000	Feas - Plan Formulation and Evaluation			$70,000
JL000	Feas - Final Report Documentation			$75,000
JLD00	Feas - Technical Review Documents			$75,000
JM000	Feas - Washington Level Report Approval (Review Support)			$50,000
JPA00	Project Management and Budget Documents			$70,000
JPB00	Supervision and Administration			$230,000
JPC00	Contingencies			$225,000
L0000	Project Management Plan (PMP)			$0
Q0000	PED Cost Sharing Agreement			$0
Totals of Federal and Non-Federal Work		**$2,085,000**	**$695,000**	**$2,780,000**
Adjustment for Required Non-Federal Cash		**-$695,000**	**$695,000**	**-**
Total Federal and Non-Fedeal Costs		**$1,390,000**	**$1,390,000**	**$2,780,000**

Enclosure D. Quality Control Certification

Completion of Quality Control Activities

The District has completed the Project Management Plan for the Coast of California Storm and Tidal Waves Study (CCSTWS) for Ventura/ Santa Barbara Counties. All quality control activities defined in the generic quality control plan for reconnaissance phase products have been completed. Compliance with clearly established policy principles and procedures, utilizing justified and valid assumptions, has been verified, including whether the PMP meets the needs of BEACON and is consistent with the law and existing Corps of Engineer's policy. All issues and concerns resulting from the Independent Technical Review (ITR) of the PMP have been resolved.

Certification

Certification is hereby given that 1) the independent technical review process for this PMP has been completed, 2) all issues have been addressed, 3) the streamlining initiatives proposed in this PMP will result in a technically adequate product, and 4) appropriate quality control plan requirements have been adequately incorporated into this PMP. In summary, the study may proceed into the CCSTWS study phase in accordance with this PMP.

_____ _____

Date Chief, Planning Division

Enclosure E. List of Acronyms

AFB	Alternative Formulation Briefing
ASA (CW)	Assistant Secretary of the Army for Civil Works
CESPD	South Pacific Division (also SPD)
DE	Division Engineer (Division Commander)
EA	Environmental Assessment
EC	Engineering Circular
EIS	Environmental Impact Statement
EP	Engineering Pamphlet
ER	Engineering Regulation
FCSA	Feasibility Cost Sharing Agreement
FONSI	Finding of No Significant Impact
FRC	Feasibility Review Conference
H&H	Hydrology and Hydraulics
HQUSACE	Headquarters, U.S. Army Corps of Engineers
HTRW	Hazardous, Toxic and Radioactive Waste
MSC	Major Subordinate Command
NAS	Network Analysis System
NED	National Economic Development
NEPA	National Environmental Policy Act
OBS	Organizational Breakdown Structure
P&G	Water Resources Council's Principles and Guidelines
PED	Preconstruction Engineering and Design
PMP	Project Management Plan
PPMD	Programs and Project Management Division
PROMIS	Project Management Information System
PMP	Project Management Plan
RAM	Responsibility Assignment Matrix
ROD	Record of Decision
S&A	Supervision and Administration
SPD	South Pacific Division (CESPD)
USF&WL	U.S. Fish and Wildlife Service
WBS	Work Breakdown Structure
WRDA	Water Resources Development Act